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FOOTBALL FOR PUBLIC AND PLAYER

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FOOTBALL

FOR
PUBLIC AND PLAYER

BY
HERBERT REED
(*"RIGHT WING"*)

WITH TWENTY DIAGRAMS AND SIXTEEN
ILLUSTRATIONS FROM PHOTOGRAPHS



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September, 1913

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TO
THE MEMORY OF THE LATE
MARSHALL NEWELL
WHO LOVED THE GAME
AND TAUGHT OTHERS TO LOVE IT
THIS LITTLE BOOK IS INSCRIBED
BY ONE OF THE HUMBLEST
OF HIS PUPILS

■

PREFACE

TWENTY years of football, as player—in an humble capacity, albeit begun under the best of coaching—spectator on the side line or in the stand, and as a sporting writer, have taught me that of all those who are bound up in the most fascinating of school and college games, the spectators form the class that has suffered the most serious neglect. Football coaches are usually secretive persons, and they have succeeded in bewildering the man in the stand even when failing to outwit the man on the field. It is the spectator who needs the coaching nowadays, and it is in the hope of clearing away for his benefit and that of the uncoached schoolboy much of the mystery that has been deftly thrown around the game by those in close touch with the great football universities that this book is offered to a sometimes puzzled football public.

For any particular system or institution the author holds no brief, for years of careful analysis of the big games have convinced him that no one football system has been able to corner all the gridiron knowledge in the country, and that the gridiron leaders are treading practically the same paths nowadays, and building for the future in the main upon principles that are considered sound by the master minds of football.

There are both strategy and tactics in football as in war—the season is a campaign, the big game a battle. These are the salient features that lift the game out of the ruck of sport to the plane it now occupies. Men of mature years and large business interests still take the time to direct

the playing of this glorified field chess, but they do not take the public into their confidence, and the spectator too often leaves the field without even having faintly begun to understand the groundwork of the great game he has just witnessed.

In the pages that follow the author has endeavored by means of simple diagrams, and explanations shorn as far as possible of technicality, to give alike to the spectator and the younger player, especially the ambitious schoolboy who has not had the advantage of expert coaching either on the blackboard or afield, some idea of the plays that have been and are successful under the existing rules, and of the generalship that either wins games or loses them with honor. The plays and the use of them tell the story, and if the spectator will apply inductive reasoning to the big games, finding his rule of play from the cases at hand, he will find the fascination of the game more than trebled.

No one knows better than the author the difficulties under which the man in the stand labors, and it is in his interest that the writer has sought to take the game apart in these pages, in order that he may put it together again, which, after all, is the real fun of football.

Credit where credit is due has been given for discovery and progress, remembering always, however, that the game is bigger and broader, more enduring and progressive than the men who teach it and play it.

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FOOTBALL FOR PUBLIC AND PLAYER

CHAPTER I

THE GAME AND THE PLAYERS

It requires no experience in prophecy to predict that the future history of the football with which our schoolboy, collegian, and grandstand enthusiast are familiar is to be as American as its past. Temperament, climatic conditions and other factors operate to insure a steady progress along lines wide apart from English, Canadian or Australian. It has been so in the case of almost every game requiring physical contact played in the United States. There are those who will point to the Association, or "Soccer" game as an exception, but it would not surprise me if in the not too distant future certain departures would be made from the English style of play, a style, by the way, with which we have become familiar slowly. In its recent form in this country the Association game will never take the place of American Rugby, which is nearer and dearer to the hearts of the best type of American college athlete and his friends and followers than any other game could ever be.

The beginnings of football were much alike on both sides the ocean, but while the Englishmen built up tradition, and worked out a game suited to the maximum of team, or as they call it in England, "combination" play, consistent with extreme individualism, the restless Americans con-

tinued their experimentation in the hope of eventually establishing a sport that, while governed by certain rules, would be one of limitless possibilities—a game of personal sacrifice of the highest order extending over a brief period, of team play and of progress. The restless, inventive, American temperament could not well stop short of this. The result has been that while the British Isles have—with rare periods of innovation and unrest—a settled game, the United States has an ever-changing one—a game that makes its tactical and strategical appeal to the humblest member of every eleven.

There breathes no player with the inventive faculty so smothered that he does not at some period of his gridiron career aspire to be a field general, to originate the plays, the tactics and the strategy that are to bring victory to his team.

This inventive tendency is encouraged in the American game, discouraged in the English. I do not think that the great mass of American football players will ever, through their legislative representatives, pass on to the officials who handle the games the supreme authority that is vested in an English referee. They will not allow invention and progress to be choked at the outset, but will be content, when such invention becomes a menace to the health of the sport, with making such rules as will discourage further progress along lines proved to be dangerous, thus turning the progressives into other channels. This was what happened after the season of 1911, when it was generally admitted that progress in the attack had been checked to such a degree that monotony was threatened. Radical re-arrangement of the rules was undertaken in the hope that the progressive tacticians and strategists might resume their onward march and so restore to the game much of the brilliance that had been dimmed by a too severe restriction of the attack.

Just as in previous years there were many who believed

that the Rules Committee had gone too far, but it was felt that such evils as might creep into the game might be remedied in succeeding seasons as players and coaches developed in freer play, in individual skill and in generalship. So it is that the American game is always on trial with the players and the public, and so it is that the restlessness of the American temperament keeps football thoroughly alive, and thoroughly representative of the changing point of view of its followers.

In England it is quite another matter. The game serves an athlete from boyhood, through school and college, and thereafter. The Englishman wants a game that he can play through the thirties, and much at his own convenience, calling for the least possible amount of personal sacrifice, even though this restriction prevents the university fifteens from reaching that height of efficiency in combination attained by the best American university elevens. The busy American demands a game that can be played to the maximum of his powers and self-sacrifice while in school and college, being quite willing thereafter to turn to other sports for his fun and exercise. The Englishman wants to keep up his football, while the American does not. The latter would rather return to see his successors develop the game beyond the stage at which he was a star, to counsel and advise, to give his brain to this advanced development, and to continue as tactician and strategist the work he left behind him as a player. The fascination is still there, but he realizes that under the new order of things he cannot hope in his own person to cope with the younger element.

Racquets, tennis, handball, golf and other sports built on individualism provide him with all that is necessary in the way of exercise and competitive fun, and I do not believe he would come out and play football even if the rules were so arranged as to fit the game to a man past his thirtieth year. The real health of American football lies

in our schools and universities, while the saving grace of English football is to be found in the great clubs, like Blackheath and the Harlequins, and the international fifteens of England, Ireland, Scotland and Wales, combinations that no university team could hope to meet with anything like an equal chance for victory.

Englishmen have the game they want, while we have, in the main, the game we want; the English game is built around a Plan, and woe betide him who takes too many liberties with it, while the American game is a mass of plans and stratagems. There are, of course, basic principles, as will be shown in these pages, but they are not the principles of immutable rule and of tradition, but rather the principles that grow out of the sum of many experiences.

We have played the English game with such patience as was at our command, and found it wanting. We went through, years ago, the game that English fifteens play every year, with occasional simple variations, and in the end discarded it. The English game for the Englishmen, the American for the Americans. Even in Canada English influence was not strong enough to prevent radical progress, and the fertile-minded Welshman has done what he could, in vain for the most part, in the face of stolidity, to work out English Rugby along novel, albeit simple lines.

It may be objected that in California English Rugby has prospered. The argument will hardly hold, for the game supplanted the American style there at the command of the heads of two universities, and the students were compelled to accept such crumbs of football as were dropped from the faculty tables. Climatic conditions, too, lent themselves readily to the growth of this sporting exotic, and yet players at the University of California and at Leland Stanford Jr. University, cling to the sharp, decisive tackling that marks the American game. Through the medium of drastic measures culminating in faculty ukase,

the English game has obtained a foothold in the United States, but not the boldest of its adherents will maintain, I think, that it has found a home. In the Middle West, an extremely progressive football center, and in the conservative East, I believe that the majority of players would rather give up the game altogether than return to English Rugby. It certainly could not remain English, for the same remorseless advance that took place years ago would again seize the game and re-mould it once more nearer to the heart's desire of the American schoolboy and collegian.

Our autumn fields are hard, especially trying by comparison with the great international field at Twickenham in Surrey, England, and the type of game that brings men scatheless through a hard match on these velvety English fields where great sections of turf may be rolled up like carpets, would prove a bone-breaker on the majority of our gridirons. Yet even with a much "softer" game than ours there frequently have been serious injuries, and occasionally death on the fields of the British Isles. On the score of injuries there would be no reason for a return to the parent game, and there are plenty of other reasons why it would be a distinct step backward.

Again the temperamental. The American athlete who is not out for individual honors on track and field, who loves team play, could hardly stomach the idea that there are moments in which he, on the field, in playing togs, need have nothing to do. It is so in nearly all games in which physical contact is an element. The American player will invent something to do. It may be unorthodox, it may be against tradition and even come close to an evasion of the rules, but it will be an expression of the American spirit that will stir his team mates to greater effort, will add to the efficiency of his team, and will arouse the spectator, be he partisan or non-partisan, to a pitch of excitement, interest and appreciation not to be attained in any other way.

This quality of individual initiative, I believe, appeals to every American. It is not lightly to be cast aside, but to be measured, to a certain extent harnessed, and used, in sport as in other activities of later life. The American game gives every player something to do all the time, permitting him at the same time to add such excess efficiency as lies within his power. What one man has done well of his own initiative, becomes in time what all men should do, and the coaches of the big elevens constantly raise the standard, until, taking the sum of the initiative of many men, they set before us their conception of the ideal player. This is a feature not to be found in English Rugby. Indeed, so rare is initiative in that game, that a tablet at Rugby school records the sensational feat of William Webb Ellis, who founded the running game, in picking up the ball and running with it, a performance alike against rule and tradition.

Succeeding innovators in England have not fared so well. Given a man of ideas in English Rugby, and at the first outcropping of individual or team novelty there is a hurried meeting of the referees and it is decided that the play is against the law. There is nothing the matter with it save that it must not be done. There has been in recent years in the English game a maneuver known as the "loose head," a maneuver comparable in a mild degree to our own shift, and it has been assailed bitterly. There were a few progressives who worked out a way to meet it and check it on the field, but the two sets of theorists were as a rule not allowed to continue their warfare of brains, and the game promptly relapsed into its former settled condition.

Colonial teams, notably those from Australia and South Africa, landed in England with new ideas built on the old foundations, and made so thorough a sweep of the important matches that the old-timers paused once more to take stock, only to decide in the end that these innovations were what

is customarily known in England as "tricky" and hence outside the spirit of the rules. In our own country these novelties would have met with favor, and the man who devised them would have been hailed as the greatest coach of his time. Had Lorin F. Deland, of Harvard, inventor of the famous flying wedge, undertaken any such revolution in the English game, I am inclined to believe that he would have been roundly condemned for his temerity and his system of play checked at once and on the field by the referee. It is possible that some day an innovation as startling will be tried in English Rugby, but certain it is that the temperament of the English player, and above all the referee, is not yet ripe for it.

Our game, because of the continued possession of the ball, is far more sharply divided into attack and defense, and for that reason the two branches of play are vastly dissimilar. Yet the one is no more attractive to the player than the other, and there are specialists in both. There is nothing in the English game and never has been that puts the player quite so thoroughly on his mettle as play on the defense as it is understood in the American game. Again, there is not a Plan, as in the English game, but many plans, and although there are, as in attack, certain well-understood basic principles, there is again the versatility and the initiative, both team and individual, that the English game lacks.

In a game under American rules between two well-matched teams, the players of each eleven are often on the attack, often on the defense, knowing in advance which rôle they are to assume. This makes for the all-round development of the player, mentally, physically and morally. Again and again he faces new situations, in which he is compelled to exercise a high order of physical and mental courage, instantaneous judgment, and initiative of the first quality. The sudden shift and shuttle of the fortunes of the game, apparently helter-skelter, but in reality orderly to the last degree,

call for perhaps no quicker action than does the English game, but undoubtedly for quicker thinking.

It is this chance for diagnosis of an opponent's purpose and method that so appeals to the American temperament, and so well fits the player for the battle of life, wherein the study of character plays so large a part. One instance of such diagnosis—many come to mind—will serve to give point to my contention. It happened some years ago at the Polo Grounds in New York City, where Princeton and Cornell met in their, at that period, annual game. Glenn S. Warner brought down from Ithaca an eleven beautifully drilled in attack under rules that had been adopted the previous winter in the hope of opening up the game. The forward pass was in use for the first time in many years. It was practically an unknown quantity. Other maneuvers foreign to the old-style game had been worked out to a high state of efficiency.

With this new and bewildering attack—the Cornellians were extremely faulty in defense—Warner's pupils began a rapid assault on the Princeton line that swept them across the last chalk mark for a touchdown. The Princeton tackles of that year were Cooney and Stannard, the former on the right, the latter on the left side of the line. Stannard was smothered by the interference, but it soon became impossible to gain ground through Cooney. Cooney began his diagnosis of the new play the moment it was tried. He counted the men in the interference; traced them when they went back to their positions. He found by this process that the two Cornell guards were in the interference on every tackle run, and he was prompt to act. Under almost any other system it would have been dangerous in the extreme for the Princeton guard next to Cooney to have swung out of his position, leaving his opponent uncared for. Yet Cooney explained the situation hurriedly to his guard, carried this man wide with him on every play, and with



Photo. by Paul Thompson.

STARTING THE OFFENSE—AMERICAN STYLE

The illustration shows a Yale eleven in normal line-up. The fact that the center has undisputed possession of the ball is the foundation of American college and school football. It is the basis of all strategy and tactics and therefore the keynote of the American game.

the extra assistance managed to spoil every Cornell smash at his side of the line. In the heat of the first few moments of the first half he had no time to pass his diagnosis and his remedy on to the other side of the line, and it was not until the lull after the first touchdown that he was able to get into touch with Stannard on the other wing. Cooney's judgment was correct, and his action perfectly applied, so that when both sides of the Tiger line knew the method of the Ithacans, Princeton won the game with something to spare and was able to rejoice in the knowledge that one of her men had faced, diagnosed under fire, and checked the first brilliant attack of the season under the new rules.

There is nothing in English football that puts a premium on this sort of thinking. The Englishmen tell us that this is specialization. Admitting that that is exactly what it is, the answer is that it is just what we want. It makes the kind of game we want and develops the kind of men we need.

It may be difficult at first for the average man to reconcile this specialization with a game, but game it is nevertheless; for those who do not so recognize it and who subordinate the individual to a machine, attempting to make of the whole matter nothing more nor less than an exact science must inevitably come to grief. No amount of progress, no amount of advancement in the art of football—and I say "art" advisedly—will ever spoil football as a game, for it is rooted in individual excellence after all, and given two elevens equally well coached the better men will win.

Were the men moulded entirely to suit an inexorable system of play, unbending, hard, exacting, there would be a different story to tell. As a matter of fact, long years of study and experience have taught the students of tactics and strategy, the masters of generalship, that they must consider their available material before settling upon a plan of campaign. The foundation principles remain—the Yale system, the Harvard system, the Princeton, Pennsyl-

vania, Dartmouth and Michigan systems—but the immediate plan of campaign must be sufficiently elastic to be altered again and again in the course of a season as well as from season to season, if it is to produce results.

But if football is a game, after all, and not so serious a business as many of its opponents believe, it is, nevertheless, the most important game we have, the sport that makes the heaviest demand upon every fine quality of the best possible type of athlete. It is the crucible in which character is moulded at an age when character is in the process of formation—it is, to change the simile, the white light that beats upon a young man's actions and ideals. Time was when it was customary to believe that the player could be little above an educated prize-fighter. That time has passed, for the player has lived down in after life this false reputation, and lived up to the reputation he enjoyed among those who really knew. At Harvard there is a memorial gate to one of the sweetest characters I ever knew—Marshall Newell, master of football, and at the same time guide, counsellor and friend.

In public life the percentage of successful men who are graduates of the gridiron is high. In the fall of 1912 "Bum" McClung—to give him his undergraduate title—Treasurer of the United States under President Taft, gave a dinner to the famous Yale eleven of '91, the team of which he was captain; and the men who gathered around the board compared more than favorably in the matter of character, reputation and attainment, with practically another picked dinner party of non-football men from the same class.

The true character of the football player has come to light only in recent years, for as a rule he talks football in after life only to his fellow veterans, from any institution whatsoever, and many a man has worked alongside of one of these gridiron stars for years knowing nothing from his comrade's lips, and frequently learning from no other source

either, of the worker's reputation on the gridiron. Indeed, many a man who comes before the public eye would prefer that nothing be said about his football career, a career that belongs entirely to himself and his friends—to them and the great host of gridiron veterans among whom it is really in the nature of a bond.

In recent years both faculty and undergraduate have come to look upon their football players as more and more expressive of the collegiate ideal—have come to feel that with all the achievement of the scholastically perfect, the merely public measure of the institution must be taken to a large extent from the performances and the bearing in the arena of the athletes, the most important of whom are the football men.

There have been from time to time important movements looking toward the purification of football—commendably when the game was in dire straits. Not the least of these newer undertakings was the formation of the National Collegiate Athletic Association, and to its everlasting credit be it said that it began without ostentation or assumption of power, believing that “influence” and nothing else would justify its existence and the existence of the game it sought to some extent to guide but not control.

Since the beginning of the game there have been several elements interested in it, not the least of which have been the fraternity of players, never more solid and tolerant than now; the faculty influence, never more inclined to discern in the game its lasting value; the influence of the coaches, never more nearly on the high plane to which it has been sought again and again to establish that influence; and undergraduate support, never more inclined to sanity, despite the organized cheering to which so many object, than in these early days of the Twentieth Century. If I believed that any or all of these influences would fail of serious improvement in the course of the next twenty-five

years, or if I believed that there was anything fundamentally ephemeral connected with American intercollegiate football, these lines never would have been written.

Opinion against football and opinion in its favor have both reached the stage where each is willing to inquire of the other, and where the "highbrow" of opposition is removed not more than a parasang or two from the "low brow" of what has been too often overenthusiastic support.

Not the least of the goodly football influences have been such men as Dean Briggs of Harvard, elected in 1912 president of the National Collegiate Athletic Association, and men like Dr. A. L. Sharpe, of Yale, who took upon himself the recrudescence of Cornell football in more ways than one, not to mention other semi-athletes, semi-faculty men, whose word is accepted alike by the athletic element and the gentlemen of the university staff. It was not so many years ago that public and scholar alike felt that he who taught athletics, and especially football, was a little lower than the rubber with whom they had been accustomed to associate track athletics.

Since those days gymnasiums have sprung up mushroom-like all over this broad land, and it remained for the University of Wisconsin to solemnly inculcate in its curriculum, counting therefor certain university hours, the "Technique of Football." In recent years men whose goal in life lay far beyond the cross-barred field, have been willing to sacrifice a large part of their time each fall to tuition in the technique of football.

Perhaps the foremost proponent of this ideal was Professor Raymond G. Gettell, of Trinity, who for some time astonished the football world by turning out a series of victorious elevens even though it was well understood that he was the author of several scientific text-books, and that his aim in life was somewhat beyond—I shall not say above—the perpetuation of football technique, and of football general-

ship. Instances of this sort of thing might well be multiplied, and doubtless the average small college and preparatory school will be able to cite cases to the heart's desire of him who does not find instruction in mathematics or the classics and football irreconcilable; but enough has been said, I think, to prove the seriousness, the need, and the natural urge for the game.

To those already enamored of the most fascinating fall pastime to be found in any country, nothing can be added to the charm of the big game—the journey to the field (not the least of its attractions); the spontaneous if from the undergraduate point of view, organized enthusiasm; the exuberant or otherwise return; and the never-ending “post-mortem” when all is over for the season. Those of us who have looked upon football of the ‘varsity caliber from the outside in these years of specialism have been much maligned in the public prints. It is said of us that we get nothing out of the game. It has been said of us that we only stand and wait, without serving, and that too often unintelligently, when we ourselves well might be afield. Yet how many of us attend when something less worthy is before us! How many of us attend upon pageants less innocent; less expressive of the things that are nearest to our native innocence as Americans!

I would absolve the spectator at the great football games of the crime charged against him; I would absolve the players of the charges against them—that they butcher one another to make an American holiday; and I would absolve the college, the university and the school, from the charge that they pervert the character-building of the class room to the primordial strife of the football field. It is no longer primordial, this pigskin battle, for the old order with its premium on individual like and dislike in sport has given way to the new order of organized effort, and the end is not yet. Only, at least so far as football is concerned,

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I am sure that the result has militated for the good of the community.

Excess of publicity, it is true, from time to time has worked its ills with the stars of the cross-barred field, but those of us who weigh football by the standards of "stars" alone are no true lovers of the game, and forget that for every man upon the field wearing the 'varsity letter, probably three have learned the game of games and have reaped from it the harvest that will make of them in years to come the intelligent, sportsmanlike spectators at big games, the wise fathers and brothers of the schoolboys and collegians that are the cornerstone of the greatest of games. One thing is sure, that if Americans did not approve—and that enthusiastically—of the game and its players, it could not exist another season. The game, I believe, will live, and will expand, and the needs of the most virile of the American people, both bodily and mentally, will be met by it.

What sort of young man has the game produced? We know what has become of the old-timers, for they are easily traceable, and an impressive percentage of them has made honorable records. The younger players are so often swallowed up in the obscurity of business life that they become lost to view, so far as their athletic prowess is concerned—and nothing finer could be said of them. What better line on the football man of the last decade could be gained than the information that he has not been heard of in athletics since he left the university!

It was Wellington, was it not, who said that the battle of Waterloo had been won on the cricket fields of Eton, and it might well be prophesied of our next war that it will be won on the football fields of our schools and universities. What has been worth while for the British Isles may well be worth while for us. You who peruse these lines ask who among your friends is an old football player, and mark well what manner of man he is.

CHAPTER II

FOOTBALL AND WARFARE—SIMILARITIES AND DIFFERENCES

THE art of football constantly aspires to the condition of warfare. Let me hasten to assure both the followers of the game and those opposed to it that this statement is made in an academic spirit. I shall attempt here merely an examination of what appear to be the basic principles of the game and of the more sinister pursuit, and shall seek to bring to the surface similarities and differences.

Many a spectator on leaving the field after a big game is prone to declare that football, after all, is "miniature warfare." His opinion, as a rule, is based on nothing more tangible than the hazy feeling that something like a battle has been fought on the gridiron, that there has been much rough personal contact, much shock of masses, all in their nature more or less orderly. It is this *orderly* hurling of host against host that gives him his impression. He would be surprised, were he to dip into the writings of the militarists, to find how much real foundation there was for his hastily formed opinion.

There are of necessity deep fundamental differences between football and warfare, but once these are understood and kept clearly in mind one finds much in a theoretical way that the two have in common. I have often heard a football coach set forth a fundamental principle of the game that might readily be adopted word for word by a writer on strategy in warfare, and there are here and there in the writings of Major Wagner, of the United States Army, of Jomini, of Wellington, of Grant, of du Teil, and in the

maxims of Napoleon, phrases that might well be nailed up in letters of brass in the field house of any of our great universities.

While it does not follow that a great football coach might have been a Napoleon, I am convinced that the Little Corporal could have been a mighty football coach had he lived in our day and generation.

I am aware that certain military men well versed in football may consider a comparison between football and warfare rather farfetched, but they are easily answered, for those among them who are actively engaged in coaching are putting into effect on the gridiron every fall, whether consciously or unconsciously, the basic principles of their calling. There are a few, indeed, who to my certain knowledge are doing it consciously. I might add that it would broaden the gridiron horizon of any civilian coach were he to make at least a cursory study of the strategy and tactics of warfare, both ancient and modern. Many a football problem would have been solved years ago had the coaches been versed in the principles of the art of war.

Even the history of football bears a striking resemblance to the history of warfare. Both, in the beginning, were rooted in individualism; both went through that stage and emerged into the stage known to military men as "shock action"; and both are to-day largely given over to what is known as "fire action": in war the long range use of rifle and field gun, in football the long range use of the kicking game and the extreme development of the forward pass and individual interference. In both the deadliest arm of the present day was the slowest of development: in war the artillery, in football scientific kicking, handling and covering of kicks. In both the final "destructive element" has remained the same for a long period: in war the infantry, in football, the line as it blazes the way for the backs.

In warfare to-day the shock action of infantry, after its

advance to within striking distance has been made possible by heavy artillery fire, is nine times out of ten the decisive factor, just as the work of the line, once the kicking game has brought it within striking distance, is the decisive factor in football. There is this difference, however, that while in war artillery is not a deciding factor save on rare occasions, in football the kicking game may settle the issue.

Generally speaking, then, in football, we may use our "artillery" in two different ways. It may be employed to bring the team within striking distance, that the line may get in its fine work, and with the running game sweep over the remaining yards for a touchdown; or the running game may be used to bring the football artillerist within striking distance. But both in football and in warfare the artillery is the great *demoralizer*; and, in football, all other things being equal, the constant use of the kicking game will at some time or another earn an opening for the employment of "shock action." The memory of the present day follower of football will run back easily enough to the period of constant shock action on the gridiron. The wedge, the turtle-back, the guards back, and the tackles back all came under this head. How little the kicking game was esteemed may be gained from the words of the late Gordon Brown, captain of one of Yale's greatest elevens: "We needed no kicker; we took the ball on our own two-yard line and carried it the length of the field for a touchdown."

There was no defense that could withstand the shock action of those days. But the shock action of to-day, robbed of its wonderful cohesion by the elimination of pushing and pulling, is quite as wearing on the team using it as on the defense, and therefore must be treasured against the moment when the demoralization caused by scientific kicking shall have had its effect and broken down the defense so that the running game may be cut loose in its full power and at its top speed with something like a fair chance

of scoring. Just as in warfare the use of smokeless powder and the multiplied range of the rifle has made the ultimate shock action for infantry—the final “advance by rushes”—far more difficult and dangerous than it was at the time of the Civil War.

But the one thing after all that raises American college football strategically to a position of lonely eminence in sport is the fact that no big game has ever been played that had not its “psychological moment.” And every great battle has had its psychological moment. So, clear down on the rock bottom, football and warfare are at one.

The theory and practice of war and football are divided into strategy and tactics, the division in the gridiron game being not as sharp as in battle, since on the gridiron one is at all times in contact with the enemy. It is not going too far, however, to state that tactics in football does not usually begin until after the attacking team has crossed the middle of the field, and that strategy continues uppermost until the aggressor has reached reasonable striking distance for the running game, or for a score by drop or placement kick. Generalship in football covers both strategy and tactics, while strategy takes less count of individual and team technique than does tactics.

In warfare there are three arms, infantry, cavalry and artillery, and if in football the work of the line coupled with all attacks of the backs on the opposing forwards between tackle and tackle be considered as infantry movements; runs outside tackle and end, whether from single, double or delayed pass, as cavalry action; and punting, place and drop-kicking, judiciously mixed with forward passing, as artillery fire, the parallel, it will readily be seen, is very close. The laws governing the use of the three arms in battle may be followed to the greatest advantage in football, as has already been demonstrated in action.

The greater part of the game, just as the greater part



Photo. by Paul Thompson.

"SHOCK ACTION" IN FOOTBALL

Application in a Harvard-Yale game of the military theory of attack, "Concentration of the destructive elements on the decisive point." (X) marks the decisive point. The theory is that of du Teil, Napoleon's instructor.

of the battle, is consumed in effecting the more or less elaborate maneuvers designed to make the final assault as simple as possible—to make it swift, sharp and decisive. Strategy leads inevitably to the psychological moment, which as a rule is seized for the effective use of shock action. Not so long ago a certain military man was watching a game of billiards in the course of which Ora Morningstar was making high runs. "There you are," he said, turning to me. "With the balls in that position you or I could make reasonably high runs, in spite of average technique. You see what Morningstar is doing; he is making the game simple."

Now a field general in football bears always in mind the ideal position from which, considering the measure of his team's ability, he should strike for victory. Yet because of a high-class defense he may never attain that ideal position. The psychological moment arrives, however, when his team reaches a position from which the elements that were to have been used in the ideal situation, may still be brought into play with better than an even chance of success. Yet this same psychological moment is often so well disguised that it takes genius to recognize it, just as it does in battle.

But while the strategy and tactics of football and warfare come closer and closer together the further they are followed, war and the game differ in the outset in certain fundamental elements that must always be kept in mind. And football, fortunately, is devoid of no end of the complications of the war game, such as the supply train, lines of communication, etc. A football game endures through one hour of actual play, a battle from dawn to darkness, with the possibilities of renewal on the morrow, and through several succeeding days. A consideration of the terrain in war presents many abstruse problems, such as the advantageous disposition of varying numbers of troops. In football the field is

restricted as to size by rule; there is no possibility of entrenchment, save as impregnable defense may be called entrenchment; the opposing teams are equal in the matter of numbers, and the choice of ground is important only as it is affected by the wind and sun. Not infrequently there is absolutely no choice save as a team prefers, because of temperament, to begin on the defensive or the offensive.

In football there is no opportunity to find cover, and no concealment of the objective of the attack save that provided by clever maneuvering in the face of and in contact with a vigilant enemy. Weak spots both in defense and attack are discovered through expert individual diagnosis and test, and the field general often succeeds or fails through clever use of or waste of superior personnel. Further, the ideal football team, playing under ideal conditions, is largely, and wisely so, a detached force. It is out of touch with its chief strategist, the head coach, and must depend upon its field general, who should enter the game untrammelled by instructions that go too deeply into detail.

Attempts innumerable have been made to run an eleven from the side line—to handle every strategical and tactical move from that presumably advantageous station. They have failed with far greater frequency than they have succeeded, for the simple reason that from the point of view of strategy the side line is the poorest place on the field from which to get an accurate idea of the progress and development of the game. There are many coaches to-day who would dearly love to run their teams from the press stand, on the topmost row, whence may be seized the scheme of the battle entire.

It is this detachment of the team in action that keeps football after all a game, rather than a series of machine-like evolutions; preserves opportunity to the individual, and insures victory or defeat to an eleven in its capacity as representative of undergraduate sport. No amount of

strategy and tactics will retrieve individual blunders, nor will it rob the team of its right to stand or fall in the last analysis to a large extent on its personnel. I call the game "field chess," with the accent on the "field," for the reason that the blackboard game and the side line general never won a big match.

Now to a consideration of strategy and tactics as they appear both in football and war. "Strategy," said Von Moltke, "is the practical adaptation of the means placed at a general's disposal to the attainment of the object in view." The definition of du Teil, instructor of Napoleon, is: "Concentration of the destructive elements on the decisive point." Certainly no football coach would need a better foundation on which to build, pasting in his hat at the same time Napoleon's maxim, "One maneuvers only around a fixed point."

Von Moltke's definition is really broad enough to cover tactics as well, and is therefore not quite as exact, for our purpose, as du Teil's, for the latter in its very terms presupposes a period when the attacking force is not in contact with the enemy. In football, of course, one is always in contact with the enemy, but in that part of the field short of actual striking distance the tactics of football in the general sense may be called passive, as distinguished from the active tactics in effect when the team faces the opposing eleven near its own goal line. There comes a time, after crossing the center of the field, and in certain cases on the defensive side of it, when active football tactics will make their appearance in the form of wide end runs, and runs from kick formations, commonly known as "long gainers," and these may be likened to the use of cavalry in raiding operations. But as a general rule the main reliance up to the moment of striking is placed in maneuvering for the right of position.

Strictly speaking, then, in football strategy deals with

plays and more especially the choice of plays in their relation to the position of the team on the field, while tactics is concerned with the execution of the play itself and with the individual and team technique necessary to make any particular play a success.

Now it is practically mandatory in football that the maneuvering be done "only around a fixed point," for the ball itself is the fixed point, and no play can be made to go with anything like power, precision, speed, and "concentration on the decisive point" otherwise. Even the forward pass, with its combined delay and deception, must start from the position of the ball in the actual line-up. Therefore Napoleon's advice is unavoidable. Incidentally it leads to maneuvers peculiarly similar to those made in actual warfare.

Let us for a moment consider the attack as it is worked out in warfare by Major Wagner, first considering the reasons why the aggressive is attractive to the commander who is reasonably well equipped. I quote Major Wagner literally, leaving his technical terms just as they appear in his work entitled "Organization and Tactics."

"The commander acting on the offensive can choose his own line of action. He has from the first a definite plan, and can make feigned attacks against different parts of the enemy's position, while massing a preponderating force against a single point. On the other hand, the defender, in the dark as to his adversary's designs, and uncertain as to the point of attack, must disseminate his force so as to be strong at every point where a heavy assault may fall.

"The offensive implies numerical or moral superiority, or both, and is an indication of confidence on the part of the commander which tends to raise the morale of the troops. This is heightened by the forward impulsion, and the turmoil and excitement of the attack; and the assailants are comparatively unaffected by the sight of their own dead

and wounded, whom they leave behind, while the defenders' killed and wounded encumber the position. The morale of the defenders is further shaken by the spectacle of an unflinching advance which their fire does not stop."

Leaving out that sinister part of the quotation dealing with the dead and wounded, there is much here that can be applied to football. The team acting on the offensive has much the same advantage that the attacking commander has in battle, save that while in midfield the morale of the defense may be somewhat shaken, it almost invariably improves as the team is driven back toward its own goal line. In football the choice of the rushing or "infantry" attack at fairly long range indicates either that the field general has overestimated the strength of his own eleven and underestimated that of his opponents, or that he is absolutely sure of the superior personnel of his own eleven as well as its team superiority. As a general rule, however, the advantage lies with the attack only when it is within fair striking distance of its adversary's goal line. The "forward impulsion" is undoubtedly one of the great solidifiers of the attacking team if the plays are not checked at too early a stage of the advance.

There are, indeed, certain institutions that seem constitutionally to need the feeling of "forward impulsion" at an early stage of the big game. Princeton is a conspicuous example, the Tigers often running the ball when before the wind, even in their own territory. Thus as far back as 1876, playing against Yale at Hoboken, the Orange and Black chose the wind, but on receiving the ball at once started the running game, carrying the leather back to midfield before kicking. There are numerous other instances, but perhaps the best example of a team's morale being affected for the better by immediate forward impulsion is furnished by the Princeton-Yale game of 1910 in which the Minnesota shift was used by Yale for the first

time in the East. Yale had had a disastrous season, losing to Brown just before the Princeton game by the score of 21 to 0. The Eli backs were notorious fumlbers, and indeed the whole team was as unsteady as I have seen come out of New Haven in many a year.

The moment Yale got the ball after the game opened the Blue set the shift in motion, and in three attempts the New Haven backs cleaned up a total of twenty-six yards. Undoubtedly if the Elis had gone in for kicking from the start, had eschewed fumbling, and had saved the shift until within striking distance, a good chance for a touchdown might have developed, but in the interests of the morale of the Yale eleven the Minnesota play was turned on at once, with great effect so far as Princeton was concerned, but with even greater effect on the Yale players, who for the first time in the season found that they were equipped with something approaching a powerful attack. After ten minutes of play Yale was fully fifty per cent. stronger than when the team first appeared on the field, and this was due almost entirely to the confidence restored by the new maneuver.

It is true of football as it is of war that the commander of the defense must disseminate his forces. The attack may always work along the safe interior lines, concentrating the "destructive elements" on one point after another, while the defense must see that all points are equally well guarded. Generally speaking, however, it may be said that the morale of the defense is stronger in the East than in the West, while the Westerners get more encouragement out of a few successful attacks than do the Easterners. Again consulting Major Wagner, we find that that authority divides the attack in warfare into three distinct phases, as follows:

"1. The preparation, which consists of the reconnaissance of the terrain and the hostile position, and the use of artillery and long range infantry fire to shake the enemy and prepare the way for the assault.

"2. The assault proper, which begins with the arrival of the infantry at effective ranges, and ends with the final charge on the enemy's position.

"3. The completion, which includes the occupation of the position by a formed body of troops and the re-formation of the victorious troops disordered by the assault. In case the assault fails, the third phase consists of the withdrawal of the attacking troops."

These three divisions apply forcibly to football, and may be translated from the art of war to the art of football, about as follows:

1. The preparation, which consists of the use of the long-range kicking game; a study of the formation and range of the defense presented by the enemy; just enough of the running game when fairly close to the center of the field to test the defensive qualities of the enemy's personnel; when past the center of the field a sparing use of the simple forward pass to induce the defense to spread, and a general shaking up of the enemy by hard tackling down the field, thus unnerving as much as possible the men in the defense who are handling kicks; and every possible effort to block the adversary's kicks so that his punter will be hurried as much as possible. Every effort short of a display of the strength of the running game should be made, to disorganize and exhaust the enemy.

2. The assault proper, which begins with the arrival of the football infantry—the line, fresh and strong; and the backs, who have done little or no running to speak of—at an effective range; which means in the neighborhood of thirty yards from the enemy's goal line; or, the running attack failing, a last resort to fire action in the nature of a forward pass over the goal line, or a field goal from drop or placement.

3. The resumption, which means the keying up of the defense to the sharpest kind of work the moment play is resumed, so that the ball may be regained, and the policy

of attack continued as in the first instance. It is sometimes wise at this point, especially if the scoring has been accomplished early in the period, to remove from the game the men who have borne the brunt of the assault so that they may be rested and sent back into the affray at the moment when the team shall have again found itself in promising position for the delivery of another decisive assault.

It should be added that in football the "reconnaissance of the enemy's position" consists to some extent in putting the burden of proof on him, by kicking the ball to him as much as possible, learning in this way what he intends doing with it and what he is capable of doing with it.

Under the caption "Long-range Fire," Major Wagner writes: "The time of beginning the firing will depend upon many circumstances of terrain, supply of ammunition, morale of the troops, and the target offered by the enemy." He warns against the exhaustion of ammunition before reaching the effective ranges.

In football the ammunition consists of the most effective plays at the team's command, and these must not be wasted until the eleven is within effective range of the enemy's goal. Granted that the opposing eleven is a strong one, well coached on the defense, it will rapidly diagnose plays that are shown at too early a stage, and thus be enabled to stop them without gain, and often for a loss, when used at what would otherwise have been an effective range. Many a team has come to grief, or has at least lost a golden opportunity for victory, through premature use, in its own territory of the sort of ammunition known as "scoring plays," so called because they are in the nature of novelties, and depend alike upon deception and cold and accurate execution for success.

Concrete examples may be found by the dozens. Harvard against Princeton in 1911, and Dartmouth against the Tigers in 1912 are outstanding illustrations. The Crimson

sprung a beautiful fake forward pass play at long range that gained twelve yards the first time shown, and would have been invaluable when the Cambridge eleven later found itself within reasonable striking distance. The Hanover eleven used a play of much the same type when deep in its own territory, for a gain around a Princeton wing of twenty-five yards. In each case kicking on first down or the use of a simple running play would have better served the purpose. As it was, the plays were used where they were unprofitable, and were valueless on the second attempt, since they had been diagnosed.

In the matter of long-range fire the war and the football programmes are farther apart, for in the girdiron game a safe rule is to begin it at once, when the wind is at the kicker's back; and there is no terrain to be considered. A fumbling enemy is the best of targets, and in such circumstances a pair of ends fast down the field can do heavy execution. It is perhaps needless to state that the kicking should be greatly varied as to direction, and if there is evidence that the enemy is able to run the ball back for good gains, the punts should be sent sailing out of bounds as far down the field as possible. This phase of the game is discussed at length in another chapter, wherein the entire kicking game is considered. For the moment, however, it is sufficient to state that this "long-range fire" is one of the deadliest features of football, as it is of warfare.

Both in warfare and football the old-style frontal attack has been abandoned to a large extent. The odds against it in both cases are far too great save when the enemy is unusually weak. Time was when nine-tenths of the touch-downs in football from a point inside the ten-yard line were made through the center or guard positions—sheer frontal attack. There was a time, too, when the Macedonian phalanx and Caesar's legions found the simple frontal attack all-sufficient. Macdonald's great column, the heaviest

fighting unit in military history, perhaps, broke the Austrian line at Wagram, just as the old-time Vs and wedges of football rammed their way down the field in the days when it was permitted to push and drag the runner and to lock arms over the backs of the forwards. Napoleon was driven to the use of the solid column when the personnel of his troops was in a sad state, owing to the casualties of long-continued warfare.

Commenting on the battle of Vimiero, Napier wrote: "Nevertheless, columns are the soul of military operations; in them is the victory. . . . The secret consists in knowing when and where to extend the front." As in war, so in football, one of the great problems has been in knowing "when and where to extend the front." In recent years, however, certain of the football strategists have extended the front to advantage even inside the ten-yard line, engaging that strong defensive triangle of which the base is the center and the two guards, and the apex the fullback, with "false attack," while the real play went elsewhere; or disregarding the center triangle almost entirely, shooting wide of it and turning out, or running wide, and turning in behind it, as prospects warranted. This method is more in line with the linear tactics of Frederick, depending primarily upon precision, and backed with all the power possible.

To-day, in teams of nearly equal personnel, it is the flanks that bear the burden of the attack eight times out of ten, the play going straight ahead on center or guard only when short gains are needed, or when the defense has been so spread as to warrant a sudden change in the objective.

But there is a great fundamental principle in football in making flank attacks that turn inside the end, and it is that in general the forward progress should be made as nearly as possible perpendicular to the line, the forward impulsion beginning at a point directly opposite the chosen point of attack in the enemy's flank. The flanking move-

ment is to-day as important on the girdiron as it is on the field of battle.

A word further about "fire action" as it is applied to football. The value of fire action in warfare has increased steadily because of the vast improvement in the range and effectiveness of weapons, even the cavalry dispensing with the old-time charges in favor of the new method. If we consider that in football fire action means all kinds of kicking and forward passing, but above all advanced individual interference, it is easy to see why it has supplanted the old-time shock action over a greater part of the field.

The change has come about to some extent through the increased range and effectiveness of individuals, and I say this in the face of the old-timers who frequently maintain that the players of their day were quite as versatile as those who make brilliant reputations under the modern rules. While there are exceptions, I maintain, and good judges with me, that there has been a tremendous advance in recent years in individual effectiveness. There is no doubt that under the present rules men like Heffelfinger, Sanford, Glass, and others of their type at Yale, like Wheeler, Hillebrand, Church, Cowan, Lea and Holly, of Princeton; like Cutts, Newell, and Waters, of Harvard, would perform up to the highest standards, but in the main the old-time teams did not have the individual range that is demanded to-day.

Plays in those days were in the main along interior lines, save when the crisscross was used for end runs, or when the Blisses of Yale, Dibblee of Harvard, or Kelly and Reiter of Princeton, turned the ends largely through sheer native speed. So far as I have been able to learn, Yale teams were the first to send men down the field far ahead of the play to deal with the ultimate defense should the runner find clear sailing down to such a point, but there was nothing like

the individual interference *beyond the line of scrimmage* that is the stock in trade of the leading elevens to-day.

This modern individual interference is fire action with a vengeance, and, coupled with the actual shooting of the forward pass and quick kicking under the line, may fairly be compared with the fire action of warfare. Save the constant fumbling of kicks there is nothing more demoralizing to the secondary defense than being constantly bowled over by opponents who seem to spring from the ground in unsuspected places. This is true whether the play succeeds or fails.

Interference beyond the scrimmage line is primarily concerned with the breaking up of the defensive triangles in such a way that the backs can be shot through into the open spaces, and these open spaces will be found in greater frequency behind the enemy's flank than behind his center, where he is bound to be numerically strong. There are five of these defensive triangles; two with their bases presented to the attack, three with their apexes facing the offensive eleven; and they can be closed up very fast. The first of these, made up of guards, center, and fullback, it is well to skirt, for it is very hard to break up, while it is best if possible to shoot the runner into the middle of the others, at the same time breaking up one corner if possible. The play will turn out or in according to the corner it is found easiest to break. The other triangles are made up of two formed by a halfback, the fullback and tackle; another composed of both halfbacks and the fullback, and the last consisting of both halfbacks and the quarterback.

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CHAPTER III

RELATIONS OF CAPTAIN AND COACHES

TIME was—in the dawn of American college football—when the captain of a university or college football team was not obliged to share with others not members of the eleven the glory of victory or the odium of defeat. He was a law unto himself, and although he was wont to choose from among the older men of the eleven advisers upon whom he leaned more or less heavily from time to time, he remained the brains of the team. In the matter of training, what there was of it in those old days, as in the matter of the actual method of play, it was the captain to whom the men turned, and who out of his experience as an undergraduate gave advice according to his lights.

Football was comparatively simple then. Practice and fairly decent living, rather than specialization, sufficed to put a well-equipped team in the field. It was natural, however, that after a successful season the captain should return to his alma mater to help his successor as best he might, and it was natural, too, that the captain in his ignorance in the matter of proper foods and hours for men preparing for a severe test on the gridiron should turn to some trainer who had handled professional runners abroad, or pugilists here. This latter experimenting was costly, for the old-time professional trainer was himself pretty much at sea when it came to conditioning young men who had not formed the sinister habits of the prize ring, and who had not the physique or the temperament to respond to the regimen of the professional.

The mistake in training was rectified in time, but the coaching development was from the start along sound lines, and unconsciously tended toward the foundation of a system that had as its basic principle the conservation of the accumulated knowledge of football to be handed down from generation to generation on the field.

Little by little the game grew in complications so that it was apparently beyond the power of any one man to handle a big university team from the post of captain, even with the advice of his predecessor. It followed naturally that as the years drew on more and more men returned to help out the eleven, although the advice they gave was not at first what might be strictly classified under the head of coaching as we know it to-day. It was more in the line of trick maneuvers with a view to discomfit the enemy, and indeed, the vocabulary of the writers of those days was full of the word "tricks" and its synonyms. The play was still largely individual, and so indeed was the coaching, calling it that by courtesy. Jones of Yale showed his successor how he had been able to block Smith of Harvard the previous season, and Smith retaliated in kind.

With team play still in its infancy the value of this particular coaching was problematical save that it established the fact that the old men were expected to return annually and put their shoulders to the wheel. The initiative still came from the captain. He it was who devised whatever novelties in procedure were to be used against the most important rival, and it was he who was responsible for what little concerted effort was in evidence.

But as the game progressed, and American invention began to show its hand, it became apparent that a man could not learn enough football in the course of his purely undergraduate life, to cope as captain with the leader of another eleven that had had the benefit of the accumulated knowledge of the seasons. Thus it was that coaching be-

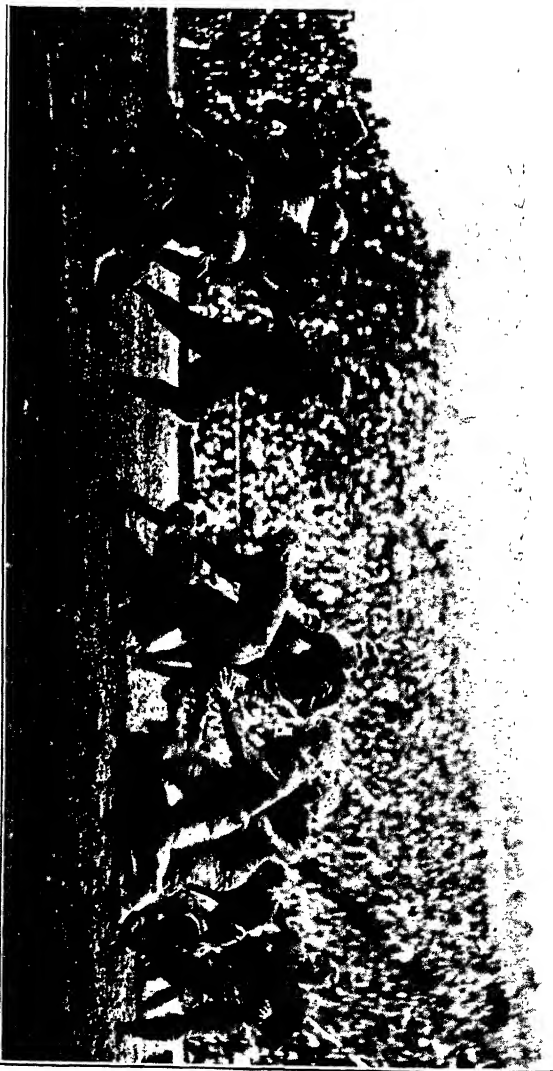


Photo. by Paul Thompson.

PRINCETON OPENS THE LINE

An excellent example of team play. A "boulevard" has been made between tackle and end of the defensive line, through which are storming two Princeton interferers with Captain Hurt, carrying the ball, just behind them. The attack has struck the opening at exactly the right instant.

came thoroughly established. More and more veterans returned at the conclusion of each season, and it finally became evident that the coaching staff, with its many specialists, was as much in need of organization as the team itself. It was an easy step, therefore, to the establishment of a head coach, who was to the other coaches what the captain was to the team.

Of all the universities Yale has clung most tenaciously to the integrity of the captaincy, and it is within the memory of some of the youngest graduates how upon occasion a Yale captain has been able to turn away the wisest of the veteran counsellors and steer his eleven for the rocks. This happened so seldom, however, that it was not deemed wise to make a change, and in the main the system worked well. There was always Walter Camp to whom to turn in the darkest hour, and it was seldom that the captain who did turn to that fount of football wisdom came away still athirst.

In the meantime Harvard and Princeton were building up coaching systems of their own, and as the captaincy was not held in quite so deep reverence at these two institutions as at Yale, rapid progress was made. It was not long before Yale, Harvard and Princeton were working along well established if somewhat dissimilar lines, and it was not long before their systems began to spread over the country. Wylie Woodruff was in the first flight of Yale coaches to take up the work at another institution, the big Yale guard going to Pennsylvania and almost at once putting the Red and Blue very much on its feet in football. Woodruff's action caused a storm of criticism at the time, but this soon died down, and his example was followed by many other Yale men, who spread the knowledge of football they had gained at New Haven all over the country, practically from coast to coast.

It was inevitable that if systematic coaching were to have

any lasting effect supreme control would have to pass from captain to coach; and there it remains to-day in most of the institutions of lesser gridiron rank. Thus at Yale the team captain remains supreme, while at a college like Wesleyan or Swarthmore football affairs are entirely in the hands of the coach. Recently a strong school football team in the East decided to abolish the captaincy, following the example of one of the most famous of the Eastern university crews.

There are still those who contend that a team will be no better and no worse than its captain, but the conviction has been steadily growing that the coaching and the work of the quarterback in these days of complicated generalship must share the burden with the team leader.

While, generally speaking, the captain is not the factor that once he was, in that he is able to shift a deal of his burden to other shoulders, and that much of the credit for the games as actually handled must go to the quarterback, the fact remains that he is still a power off the field, has plenty of opportunity to show the faculty of leadership on it, and that upon his harmonious relations with the coaching staff depends in large measure the success of the team. Many a big university team has gone through a disastrous season simply because the captain and the head coach were at odds, or because there were dissensions in the coaching staff, the captain arraying himself on one side, the head coach on the other. Only a few years ago the captain and the head coach of one of the largest of the Eastern university elevents were hardly on speaking terms, with the result that the team was split into irreconcilable factions. Disaster under these conditions was inevitable, as indeed it always will be.

Under football conditions as they are to-day it is pretty well understood that there is plenty of room for both captain and coach, each in his sphere, so long as they can work in harmony. Of the former example in the matter of individual

earnestness and headwork and a high quality of leadership are expected both on and off the field, while of the latter wide football knowledge, ready judgment of men, and the ability to get the utmost ounce out of his subordinate coaches are demanded. The head coach must have even beyond this something that for lack of a better term I shall call "thrust." This is a quality not readily to be defined.

It is not too much to say that there are hundreds of men who know football as thoroughly as some of the leading coaches, and yet who are not by nature constructive; who represent only passive ability, valuable often in an advisory capacity, but useless when in a position of authority. These men are not necessarily lacking in heft of jaw, in tenacity or imposing physique, but they are not born to command, are not born to teach, are not born to "get it across," as your true football enthusiast calls that happy faculty of "lifting" a team up to its top plane of efficiency through sheer, indomitable personality.

The number and quality of the coaches increases, of course, from the small preparatory school up through the smaller colleges to the great universities. At Yale there is annually a cloud of coaches, sometimes two men for every position as the day of the big game approaches, while Harvard and Princeton work with a smaller number. As a rule no more men stay through the season at New Haven than at Cambridge and Princeton, but it is in the closing days that the Elis make their supreme effort. At such a time not one man, but twenty men are "getting it across," even if the process means no more than going down the field with the players and yelling "You got him." When the Yale system is working at its best the sense of personal responsibility is insisted upon to almost a morbid extent, each man on the team feeling that he is personally responsible for the failure or success of the play, and he alone. It is impossible for the smaller colleges and the schools to carry

the system to that extent, and at these institutions the burden of the head, and perhaps the only coach, is heavy indeed.

But it is specifically with the functions of the captain, the head coach and his regular assistants, rather than with the army of eleventh hour "whips" that we are dealing here. As a general rule the importance of the captaincy is even greater in the school than it is in the university, and among the larger schools Andover has gone farther in the inculcation of self-reliance in team leadership than any other institution of equal rank.

In the smaller schools the captain is apt to be the oldest boy on the team, and so something of an idol to his fellows. He can do no wrong, nine times out of ten he is almost a class above his team mates as a player, and he is followed with a blind obedience and an enthusiasm not always found in institutions of a higher rank. Him the coach must bind to him with hoops of steel, for the team will be to a large extent built around him, and a certain amount of outward and plainly visible deference on the part of the coach enhances his value as a leader.

There are exceptions, of course, notably cases in which a young instructor with a college reputation as a player does the coaching. This sort of man is usually extremely popular, and he finds it far less necessary to deal with the candidates through the medium of the captain. Even he must remember, however, that once on the field the team passes from his hands to a very great extent, and if he be of the conscientious type, more and more in evidence these days, he will see to it that the boys get into the habit of self-reliance, playing their own game, on the foundation laid by him of course, but meeting contingencies as they arise without so much as a thought of looking over to the side lines.

On these school teams the coach and captain should be inseparable on and off the playing field, and much is

often to be gained if the two will journey together early in the fall to witness one of the fairly important college games, even when the school team itself is scheduled to play. On their return the captain has much to tell the eleven about what he has seen in the way of large caliber football, his enthusiasm is fired, the team has had the experience of playing without a leader, and the prestige of the coach is heightened by the lecture he will be able to give on the lessons to be drawn from the contest he has just witnessed. A small matter, this, if we trust to surface indications, but an important one, as every man who has handled a team of boys knows.

School players are of course simply at the dawn of the game; they are more prone to nervousness than their elders of the colleges, and few coaches can hope, under the present rules, for that smart handling of the ball that will enable the coach to build up a complicated style of play. It is usually a good plan for him to adhere to the simpler formations, to grind into the boy, at an age when he is extremely eager to learn anything to be learned outside the class room, those everlasting fundamentals of football that will be his greatest asset once he enters college and tries for the "big" team. It is the well-grounded boy who gets the quickest opportunity when the first call for Freshmen candidates is issued at the university, and it is the knowledge of fundamentals in a recruit that first catches the university coach's eye. He trusts to himself to provide the rest. There are of course a few exceptions to the general rule prescribing simple formations for schoolboys. "Pa" Corbin of Yale once turned out a school team that for variety of play and deftness of execution was on a par with any of the college teams of that year. This, however, is a rarity.

In the case of a single coach at one of the smaller colleges, the situation is very nearly the same as in that of the school, save that the college coach will have opportunity to draw

upon a few graduates for assistance in individual instruction. In selecting these men it is an invariably wise plan to turn their appointment over to the captain. As a rule, before the season opens, both coach and captain write to all the prominent football men of former years, the captain, however, being allowed to send out all those invitations to return marked "urgent." The ideal plan, of course, is to welcome all the old-timers whenever they show up, but this is feasible only when the college has had a long and fairly successful career on the gridiron.

The returned graduate who played on an inferior eleven inspires little confidence in the players, for he has not the bearing of the man who has been in the habit of achieving victories, and it may be, indeed, that his own knowledge of the game is faulty. Uniformity is best obtained by getting together only a selected few. These return in rotation for more or less general coaching, or in squads, the members of which are told off as instructors in certain positions.

It is always a good plan to make absolutely sure of the return of an old-time punter and drop-kicker who has the knack of imparting his knowledge to the candidates, for this will take a heavy burden off the shoulders of the regular coach, and will assure strength in the most important department of the game to-day.

To the average spectator at the big football games it would be a revelation could he peep behind the closed doors at a coaching council at one of the great universities. He would find anywhere from six to twelve men in solemn, and sometimes heated, conclave, around a big table, studying the situation and mapping out plans with all the earnestness of a cabinet or a ministry.

The head coach, not necessarily at the same time the strategist, is in absolute charge, and his word is law, but he is a poor head coach indeed who does not welcome an

occasional clash of opinion among the members of his staff, even when that clash involves some of his pet theories. The chief has necessarily a bird's-eye view of the situation, and must rely upon his aides for intimate reports on the problems at hand. If he is the right sort of chief he is even tempered, with incredible patience, and the firmness that comes only of long experience and due deliberation. He must be ready and willing to meet openly and frankly every challenge of his policy, and to meet it with convincing argument.

His is a sort of benevolent despotism, and he must be a devotee of absolute justice, to be rendered only when every man has had his day in court. There will be times, however, when he will have to stand firmly on one policy or another against his entire staff, as well as the captain of the team, convincing his aides if possible that he is right, or staking his all on the chance that he is right and all the others are wrong. Fortunately such a situation seldom arises.

There is only one man upon whom the head coach has no veto, and that is the trainer. In all other matters his authority is supreme. Now if the relations between the coach and the captain are of the best and the captain in consultation with the coach, has chosen the assistants, it would seem to follow that there should be little friction. Unfortunately that is not always the case, for football coaches are apt to be men of strong opinions, opinions for which they will make a reasonable fight, and the head coach therefore must be a man of supreme tact.

Granted that the coaching staff moves as smoothly as a machine, there will be differences in the matter of detail from time to time, and the chief occasionally has to stand between the team and his own assistants, and with his strategist, if he has an assistant acting in that capacity, and against the other coaches.

The view of the head coach is perforce the larger view,

and he must maintain his eminence in that respect at all cost lest his own judgment be warped and disaster follow. Through his scouts he will know more than the other men of what the other great teams are doing, and he will naturally be broader in his treatment of his team and its theory of play than any of the specialists under him possibly could be. It is a poor sort of assistant coach who does not at times doubt the wisdom of his chief and go to him frankly with his doubts. The "Missourians" of football are usually the defensive coaches, who believe so thoroughly in the efficacy of their own defensive methods that they cannot see how the plan of attack laid out for the team is ever going to gain ground against an eleven that appears, at least on paper, to be equally strong. These men are often difficult indeed to convince that things are as they should be, and, indeed, the rivalry between the attacking and defensive coaches—the attack almost always invariably in sole charge of the head coach—is keen throughout the season; this in spite of the fact that the chief is also presumably a well-equipped defensive coach as well. It is here that firmness and tact count heavily.

It not infrequently happens that a big university eleven does well under a head coach who has very little assistance anywhere near his own caliber, as Wisconsin under Juneau, Michigan under Yost, and Minnesota under Dr. H. L. Williams, but as a rule I believe that the fairly balanced staff, working smoothly with head coach and captain, is the better plan. For an eleven of the first rank ten men are none too many, as follows: one man each for the center, guards, tackles and ends; one general line coach, useful both on attack and defense; one man for the general defense and one for the secondary, who would also be useful as a coach for the backs on the offense; one man for punters and drop-kickers; the head coach, who should be himself a strategist and general offensive coach of the first rank;

and a man for the quarterbacks, the last-named one of the most important in the group. Splendid results have been obtained by a staff of this size, assigned as I have indicated, and the great university elevens can hardly be expected to get along with fewer men, partly because so much of the early season has to be used up in the sifting out of the masses of material, and partly because the team will be pounded hard as the big games approach, and will be expected to come along with a rush in the first week in November.

The absolute organization of such a staff at the earliest possible moment is a necessity. There must be an exchange of opinion on every department of the game between the chief and his aides before the men get down to work. The head coach will lay out for the free and frank criticism of his assistants his general theories of attack and defense while the captain is rounding up the material and looking it over on the field. From the general discussion of the strategy and tactics of the game the conference will get down to details, and one by one the head coach will take up with his assistants the particular work laid out for each.

The session will begin with what amounts practically to an examination, and end in a conversational clinch. And the captain must know every move. Each of the assistants will be held absolutely responsible for the work in his charge, and there will be a general gathering at least twice a week. As the season advances one of these meetings is usually held right after the game, when the chart of the gridiron fracas is gone over, notes are compared, and the coaches later discuss the game in detail with their pupils, using the blackboard. This is the time to correct faults, when the game is fresh in the minds of the players, and not infrequently fresh in their flesh and bones and skin. The other meeting of the week is usually a Wednesday affair

when the work is again gone over and plans for the coming game are discussed. Blackboard talks usually are handled chiefly by the head coach, but it is a good plan, and one followed at most universities, to let the other coaches and the players have a chance, with a view to correcting individual faults. This is a matter that comes more properly under the head of a later chapter, but I mention it here as an indication of how little time it takes to get the members of a coaching staff thoroughly acquainted with one another and the captain.

Apart from their conferences with the head coach it is the custom for his aides to talk things over among themselves, to exchange observations of the temperamental and other peculiarities of the material they are handling, to ask and give advice in technique—especially is this important for the line coaches, since it is one of the foundations of team work—and to discuss the progress of the eleven as a whole.

The coach of the quarterback spends perhaps more of his time with the head coach than with any of the others, for it is some one of his pupils who will be held responsible for the generalship with which the team is run on the day of days, and although the strategy to be employed should be the common property of all the coaches and with rare exceptions of all the players, it must become second nature to this particular coach and his men. The defensive coaches should be inseparable, never failing, however, to keep always in touch with the chief, for, as has been said, he is the presumable master of defense as he is of attack, and the specialists need constantly to refresh their point of view through the medium of frequent conferences with their leader.

In a later chapter the detail work of the coaching staff will be discussed at greater length. I have sought to show here the importance of harmony among the men who are

to teach the team, and harmony with the captain, who is the all-important connecting link. If the undergraduate leader and the head coach find it necessary to be in absolute accord it follows easily enough that the lesser coaches should spend some of their time with the captain. It must be remembered that the latter is of necessity in closer sympathy with the players than older men could possibly be, and while he is not perhaps so apt to judge their character accurately, he is at least certain to know enough about his class and his team mates to set the older and wiser coaches on the right track.

In the strictest sense the captain is the man who leads the eleven, the head coach the man who is expected to push it. The captain is in the forefront of the gridiron battle from the beginning of the season, while the head coach is the man behind the team. The one is a rallying point, the other a constant urge, a "thrusting" force that should be both feared and respected. It is a mistake, however, to expect that either shall be a superman. Much in the way of individual fault can be forgiven a captain so long as he is a cool, rapid-fire thinker and an inspiration where the battle is thickest. No captain can hope to conceal from the best of his associates such faults as may be rooted in his own play, and he should be as frank in criticism of his own errors as of those of any other member of the team. He is, after all, only human. The one unforgivable fault is a mistake of the head. He should know his game better than any other man on the team, whether or not he can play up to the standard he has set for himself.

But if the captain is to be a leader in word and deed, none the less is he to be a leader in self-sacrifice. More than one captain has failed miserably in his crowded hour because he undertook to make the touchdown that should have been left to some other member of the team. It requires a high type of courage for the captain of a great

university eleven to put aside the temptation to shine personally at the expense of his fellows, or when badly shaken up to leave the game in favor of a substitute, who, if not nearly so good a player, is at least in far better shape to be of real value to his team.

It takes courage, too, to weigh the situation in just the tick of a second and decide upon the psychological moment for going into action personally in the hope of starting a rally that may turn defeat into victory. It is easy to criticize, and the captain is out in the white light that beats upon a leader under fire. His position is peculiarly difficult in that he is expected to show not alone superior brain work, but too often also superior personal playing skill. He may be criticized for doing too little of the work, or for doing too much, and in either case his reputation is bound to suffer.

Happily, in recent years, the game has been blessed with any number of almost ideal captains, both on big and little teams, and they have done much to set an example for the men who will follow in their footsteps. Examples of almost heroic personal achievement and of almost heroic personal sacrifice have been so numerous that any schoolboy should know these days just what sort of person a captain ought to be.

There was one instance not so long ago of a captain who deemed himself in too poor shape to play in his big game. Sending a substitute into his position he watched the struggle from the side lines. His sacrifice went to the extent that he deemed it inadvisable to play for even so much as a single minute. It is seldom that a football leader is called upon to make so great a sacrifice as that, but the fact that Francis Burr, of Harvard, was able to do it, and do it cheerfully, has been an inspiration to Crimson captains who have come after him. It is seldom nowadays that one sees a badly injured captain led from the field,

fighting all the way to the side lines. A captain in that condition is of no possible value to his team, and no one should be quicker to realize it than he.

Some one of the militarists has said that "a knowledge of human nature is half of the science of war," and General Sherman wrote:

"There is a soul to an army as well as to the individual man, and no general can accomplish the full work of his army unless he commands the souls of his men as well as their bodies and legs."

What General Sherman said of an army applies with marked force to a football team. There have been great elevens with "souls" and poor ones, too, quite as well equipped in that respect. Fred Daly's Yale team that snatched a victory from Princeton not so long ago and fought a far superior Harvard eleven to a scoreless tie in the same season had a "soul," and Captain Daly found it and understood it and made the most of it in its two big games. There was a "soul"—call it a personality if you prefer—in the Harvard eleven of 1912, and Captain Wendell made the most of it.

It is this "soul," this subtle response as an entity that makes certain elevens stand out so conspicuously, and it is the one thing that both the captain and the head coach must grasp and understand if they are to be ever-victorious or rally brilliantly when the real test comes.

Every now and then one reads, during the football season, that such and such a team has "found itself." This means nothing more nor less than that the team has found this "soul" of which General Sherman wrote, and that captain and head coach have found it, too.

CHAPTER IV

SELECTING MATERIAL AND BUILDING THE TEAM

FOOTBALL, as it is understood especially by captain and coach rather than by the spectator, begins much earlier than the uninitiated might imagine. It is hardly too much to say that so far as the two representatives of the system are concerned another season's work begins immediately after the conclusion of the final game. Mistakes have been made in that game, or perhaps theories that have been hitherto nothing but theories, have proved sound and of sufficient value to add permanently to the football stock of the institution in question. Most of the players are apt to forget football after a few days and turn their attention to some winter sport. Not so the captain and coach, who, if they hope to be successful another year, begin at once the building process.

On the night of the big game there is unexampled opportunity for the head coach to obtain the opinions of graduate coaches, who, of course, have been out in force, and if the game has resulted in disaster there is some pretty plain speaking at the dinner to the team that immediately follows the final game.

Throughout the season there has been as a rule some conflict of opinion among graduates as to the expediency of certain styles of play, for much of football is fairly debatable nowadays, and the last night of the campaign is the best possible time for attack and support of these opinions with the achievements and blunders of the big game fresh in

mind. There is less restraint in the course of the discussion than there would be were it left to a later date, and the men who have been in the game and borne the heat of the combat and perhaps the burden of defeat are in proper mood to learn the lessons of the afternoon's struggle.

If there is anything radically wrong with the system it should be brought out at once, for there will be more and better critics on hand than it will be possible to gather together before another fall. Most of the radical changes in system, indeed, have been in their incipency right after the big game, and the subsequent proceedings are largely deliberative. Such has been the case notably at Yale and Harvard, where a horde of old-timers is to be found available at the conclusion of the game, and outspoken old-timers, at that. It will be possible under such circumstances to crystallize opinion to some extent and make the path of coach and captain alike easier before the winter breaks up and there is any chance for spring practice. It is not my purpose here to deal with the ethics of spring practice or preliminary practice in the fall. It is enough to say that both are in common use and are not without their results.

As soon as a captain is elected he at once takes stock of the material left over from the team for another season, and receives the fullest report possible from the man who has been handling the Freshmen eleven, since only the Freshmen and the second eleven can act as "feeders" as a rule to the 'varsity squad nowadays. It is a wise captain who looks up the scholarship of the men who are to be available another year, who has a quiet little talk with the laggards, and who, in exceptionally troublesome cases, calls in a graduate to help him impress upon the possible delinquent the value of a high standard in studies. An appeal to the loyalty of the player is often not without results, and it is here that the captain begins to make his influence felt. He is captain off the field as well as on, on the campus and in

the class room, and if he is to be a successful one, he must keep steadily at football out of season as well as in.

The head, or resident coach, busies himself with a review of the season, and files away for reference his observations and those of his assistants and scouts, that the "system" may go on without a hitch and may profit not only in the following season but in many thereafter by the experiences of the campaign just closed.

.. Subsequent proceedings present no serious obstacles if the season has been fairly successful and the head coach has been confirmed in his methods. Simpler still is the course to be followed should the general undergraduate and graduate football spirit be high. Happy the coach who is working with what Dr. A. L. Sharpe, of Yale, calls an established "football family." In an institution ideally adapted to the successful pursuit of football a fair knowledge of technique is spread pretty well through the university, and intelligent undergraduate criticism is an exceedingly effective weapon. Unintelligent undergraduate and graduate criticism, on the other hand, is an unmitigated nuisance and should be treated as such.

The clever head coach will make every effort to keep the university from getting out of touch with the team. To this end he should be seen frequently on the campus and wherever the undergraduates congregate, making of himself a link between the team and its supporters. He should never hesitate to act as volunteer spokesman for the team, and should be as frank and open as possible in telling of its progress. In getting ready for the season he should take care that through the university publications and through other means there will be a thorough understanding of just what the prospects are before the season opens and just what, in a large way, are the problems that coach, captain and team must solve. It is a mistake, I think, to belittle good material to the team's supporters, and an equally great

mistake to raise any false hopes. The head coach must have the support of the university behind the eleven, yes and behind the second eleven as well.

It is a good sign when a large crowd turns out for the early practice, broken up into small groups shouting for individual favorites. This close following of the early work should be kept up and encouraged, and for this reason he is a wise coach who puts not his faith in over-much secret practice. Even the most loyal of non-combatants find considerable difficulty in working up anything but machine-made enthusiasm on the day of the big game over men whom they do not know by sight. It is in ways like these that a "football family" is built up.

Granting, then, that conditions at the university in question are favorable, that the scholarship of the left-over candidates and veterans is all that could be desired, and that the system in use is supported adequately, the first serious football move is made in the spring when the more promising material is called out for practice of a light order. For this work the men should be lightly clad, as there is to be no scrimmaging. They should have prepared themselves by getting in good enough condition so that the head coach and the captain will be enabled to get a fair idea of their speed and activity. Of course it is too much to expect that the big men of the squad will be down to actual football weight, and allowance will have to be made for this, but it will not hurt the candidates for the backfield and for the ends to do a little early track work in order to tune up in speed and quick starting.

The bulk of the work will consist of kicking, passing and catching kicks—general handling of the ball—running down the field, quick starting, and walking and trotting through the simpler formations. New men will thus have a chance to work off their natural awkwardness. A football is one of the most difficult things in the world to handle, and under

the rules that have been built up since the open game came into existence there are innumerable occasions upon which it must be handled like a baseball. The great fault of most teams that have failed in the last ten years has been poor handling of the ball, and practice in this department of the game should be never-ending. Almost every man, especially the forward who comes out for football, has a natural tendency to "fight the ball" and he should be taught to overcome this in spring practice if possible. There is so much to do after the season opens that it is a handicap to the coaches when they have to go back to the beginning and teach their men how to handle the ball all over again. The period of spring practice is not too early to begin to teach the candidates that fumbling a loose ball is a crime and missing a punt a sin. It may be objected by their elders that these terms are a little harsh for faults connected with a mere game, but the answer is that a certain amount of exaggeration is necessary in an appeal to the husky young man in his second or third year in the university, and that he takes his other college activities quite as seriously. There is no reason, then, why football should suffer any more than the fraternity, the class, or indeed the class room. Undergraduate life is, rightly or wrongly, one of enthusiasms, and the rewards and punishments of the gridiron are established accordingly.

In the course of this same spring practice it would be well if some enthusiastic graduate could be prevailed upon to give prizes for punting, drop-kicking and forward passing, taking account both of accuracy and distance. It is never too early to uncover a kicker and forward passer, and the attractions of competitive athletics ought to be a part of football as early and as often as possible.

In working up the simple formations it would be well to give the veterans their old places at once. They are heroes to the undergraduate, and should remain so until some

newcomer bowls them from their pedestals. There is one other matter in which many coaches err, and that is in placing a greenhorn alongside a veteran instead of using an experienced man from the second eleven. It is better to group all the experience in one set of men and all the inexperience in the other. The greenhorn will then have an opportunity to watch the veterans at work and will not have to make a show of himself in public and perhaps lose a friend through clumsily stepping all over the old-timer, who is not particularly enamored of that sort of thing.

Simple signals should be evolved at once, and the men taught to run through formations from signal. Indeed, the chief value of this early practice, beyond giving the coach and captain a line on the material, and emphasizing the value of clean handling of the ball, lies in the opportunity it affords of getting the less experienced players to feel at home on the field, individually and as an eleven. Every encouragement should be given to the newcomers—in the hustle of fall work, when a great deal of hurried weeding out will have to be done, there will be less time for this sort of thing. Especially is this true of the promising kickers, who should be allowed to do their punting and drop-kicking in their own way, taking their own time, and even two steps if necessary. The fall is time enough for the polishing process.

By the time the spring practice is over there should be at least two tentative elevens in the field, thoroughly conversant with the rules, well under way in the matter of handling the ball, and sufficiently worked up as to enthusiasm to be willing to make almost any sacrifice in the hope of "making" the 'varsity team the following fall. It remains now only for the coach to keep the men at the point to which he has brought them, and to this end he should ask the candidates to keep in fair shape throughout the summer, handle a football during vacation with some degree of regularity, and

return early in the fall, perhaps about a week before the university opens. The spring practice makes for better acquaintance and for a degree of mutual confidence not to be worked up in a hurry in the fall. When the university opens there is no time for introductions and exchanges of pleasantries, and it is well for the work of the team if the man trying for left tackle shall already have started up a friendship with the chap who is out for left end.

The spring practice is the first real step toward laying out the campaign; the second generally is taken some time in August, when the head coach, equipped with memoranda of the material at hand and data on such rule changes as may have been made, sits down to decide tentatively upon the style of game his men will be called upon to play. It may be that he has in his squad more weight than speed, or vice versa; that the men are husky and willing but not too quick mentally; or that they are small but extremely fast, brainy and aggressive. It is true, of course, that the fall practice will make some difference in his calculations, but as a rule he can be pretty sure in August what general style of play will be best suited to the available material.

He will decide also, in this little private August seance, whether it will be worth while to move some of his veterans from their old positions to new, either to concentrate or distribute the strength of his team, and whether he is apt to be stronger in the kicking or the running game. The weight of his men will be a big factor, for all other things being nearly equal, the heavy man will be of the greater value. There will be some positions on the team in which weight will have to be sacrificed to speed, and others in which weight will be a commanding factor, and he is a poor coach indeed, who in laying out the skeleton plan of his team does not take into account the possibility of getting a new and stronger combination by shifting his experienced men. A center often makes a good guard or tackle, a substitute

tackle sometimes develops into a first-class center, and so on. Further, in contemplating these changes, the head coach will take into account the individual strength of his coaching staff, relying sometimes more upon the coach than upon the player for a successful change in position.

In the end the head coach will consider the matter from the point of view of the opposing coach or coaches. I once heard a head coach say at one of these quiet August seances, "They say you can no longer run the ball under the present rules. Therefore, I'll run it." And he did run it, perhaps more successfully than any other coach that season. The head coach will attempt to evolve the game that he would teach had he ideal material, the game that would be advisable for strength in certain positions, and so on until he hits upon the game that seems best suited to his tentatively chosen eleven.

Coaches are constantly upon the two horns of a problem—whether to fit the plan of campaign to the available material, or drill the material to fit an ideal plan of campaign. Since in recent years football has shown a marked tendency toward standardization, however, the first course is the one generally adopted. The standard game is taught, and the changes in style that are specially adapted to weight or to speed, as the case may be, are taken up later in the season and serve as the basis for the hope of victory.

Despite the fact that after the radical rule changes of 1911 the defense against the running game did not show the falling off that had been expected in many quarters, there has remained an abiding faith in the ability of the attacking team to gain ground, ball in hand, in any part of the field, so that the running attack, far from dwindling in importance as it seemed likely to do before the extension of the forward pass zone behind the two goal lines, has shown marked progress. I take no serious risk in predicting that in the future the running game will show to the

utmost advantage when backed up by high-class work in the other departments of play.

It is impossible to convince any first-class coach nowadays that the running game will never be consistently valuable. It sometimes happens that a team will have to be built largely around one man—a man like Brickley of Harvard, for instance, or Sprackling of Brown—and under such conditions the coach will naturally make the most of the open, or “loose ball” game. Granted a good center and a veteran pair of tackles, however, and there will be a natural drift toward the running game, toward sharp thrusts into the line, for, as so often has been the case, the tackles after the radical rule changes of 1911 have become once again the storm centers of modern football. Over them, inside and outside of them much of the ground will be gained, and on the attack they will be held largely responsible for making a path for the runner, doing the double duty of making the path for the runner and going on to engage the secondary defense, the latter nowadays the terror and despair of the offensive coach. It is this heavy burden that falls upon the tackles in any possible plan of campaign that makes their work so important and their selection at the earliest possible moment imperative.

Most coaches, when they find that they have a good pair of tackles, will plan to make a specialty of their work on attack, not infrequently changing the whole complexion of the line in order to let them work together. The ideal tackle should weigh close to 200 pounds and have a large share of speed and brains. If a light end is to play beside him some of the speed may be sacrificed to weight, whereas, if flanked by a heavy end and with heavy backs behind him, some of the avoirdupois may be dispensed with in the interest of speed. In a general sense what is true of the tackles is true of the entire team.

Every man should be fast, heavy and strong, for with push-

ing and pulling eliminated from the game there are innumerable occasions upon which a man has to stand or fall on his own sheer strength. Weight can be spared at quarter better than in any other position, and if the candidate is strong and active, a comparatively light center will fill the bill at the pivot position, especially if he be a good passer. Indeed, I think that a coach in picking out a center should sacrifice nearly every other quality, if necessary, to sure passing. Again, the lighter the backs, the heavier the line should be as a rule. Incidentally there never was a set of rules for the American game in which heavy forwards were not an important and a great deal of the time the deciding factor.

For this reason it may sometimes be necessary to go into the big game with personally rugged material that has at command only a certain small number of plays in which the men are letter perfect—plays, that, simple as they may be, are nevertheless executed with never failing power. If this heavy material be not available, then the head coach will have to make up in versatility what his men lack in ruggedness. In either case, the players must be well equipped with brains, for there is so much individual work nowadays, and the game is so shifty, that mere bull strength is no longer at a premium. Granting that weight, speed and brains are essential in line material, height is of less importance, save on the ends, where the wing men nowadays are expected to reach up and take the forward pass in mid-career, snatching it cleanly away from the eager, leaping, secondary defense.

If sacrifices are necessary in picking out material for the planned campaign, the head coach is more likely to sacrifice speed in the forward line than in the backfield, for the backs have an enormous amount of ground to cover against the improved running game, the unrestricted forward pass—unrestricted beyond the line of scrimmage—and the quick kicking under the line that was restored to football after

some experimenting with a five-yard restriction back of the line. The restriction was taken off the kicking in the interest of strengthening the attack, greatly increasing both the actual kick and the threat thereof. In the case of a light back who is built close to the ground the rule regarding weight may be overlooked now and then, for 150 pounds with a low center of gravity is sometimes as good as 180 pounds well up in the air. These short, stocky backs, however, are extremely rare. On the defense as well as on the attack weight is of the greatest value, for under the rules as they are worked out to-day individuals in the defense come in for some hard hammering at the hands of fast and heavy interference, that, unless the forwards be alert to the last degree, has been able to get up considerable momentum.

Ler us consider for a moment the attack so far as its individual members are affected by the latest rules. Under the old rules it was possible to make a first down in three tries when the backs averaged $3\frac{1}{2}$ yards on each attempt. But since kicking was usually resorted to on the fourth down or third try, the backs were really required to average 5 yards each to earn a first down save when inside the ten-yard line, when the average naturally and automatically returned to $3\frac{1}{2}$ yards. Under the revised code the backs have been compelled to average $2\frac{1}{2}$ yards in order to earn a first down, but since the fifth down, or fourth try has been given over to punting, this has meant that the average has been after all, $3\frac{1}{2}$ yards, with the advantage over the old code that the three tries could be used without losing the ball.

Naturally the decreased necessary average means a premium on heavy backs, for the runner's length is of more importance even than it used to be. Therefore the man who is fairly sure of his own length every time, and is big and strong enough to keep his feet when tackled, must



Photo. by Paul Thompson.

A CLEAN HEAD-ON TACKLE

The tackler has hit his man so hard that the latter has had to use both hands to cling to the ball. Furthermore, he is falling in such a way that he will not be able to add his own length to the run.

always be in great demand even though unable perhaps to make a ten-yard gain at any time in the course of the game.

Now the back of to-day must depend upon his own efforts to make ground after he is tackled, since his teammates cannot assist him, and the big, rugged back is more likely to keep fighting along than the small one, no matter how speedy the latter may be. Under the ten-yard, three-down rule, every effort was made to get a fast man loose, but under subsequent rules there has been a consistent effort to turn out backfields able to add the runner's length to small, but consistent gains. Considering that the ball is not held head high, the back of reasonable stature should be able to add very nearly a yard to his run if he is big and strong enough to trouble the individual tackler, and this means, of course, that the average necessary for a first down may be markedly reduced simply by picking the right type of back.

The big man, if he is quick enough to make the sharp turn so valuable when carrying the ball, can meet his tackler head on, and so carry on, over him, whereas the lighter man is of necessity stopped the moment he strikes the secondary defense; and if he depends upon wide end skirting is apt to be thrown for a loss. Even a small team, therefore, should have at least one big, rugged man in the backfield, even at the cost of removing him from the line. Men of the Wendell or Heston type are the darlings of the coaches.

The next problem in selecting material will be its value in the interference. Here, too, the big man is in demand, for even if slightly lacking in speed, he will be able to make up for it in the power of his lunge into the tackler. In the quick dashes just over or inside tackle or guard, it is not the number of men preceding the runner, but their power when they strike, that makes or mars the play. Their

work will be highly individual, as indeed, has been most of the effective interference of recent years.

It would be well for the head coach to decide, when picking out his men, whether he intends using a guard in the interference, for this will make a difference in his selections. The value of a guard so used—when the interference is not made individually beyond the line of scrimmage—is problematical. Some of the best coaches in the country believe in swinging the guard around, while others, equally capable, maintain that it is suicidal. The interferer, whether a line man or a back, faces the necessity of accounting for one opponent without assistance, and if necessary, going to earth with him, leaving his back to fight on alone. Here is where weight and strength count and count heavily.

Just how important a factor was the heavy back in the remarkable season of 1912 may be gained from a study of the Harvard-Yale game that year, when Wendell and Hardwick of Harvard at times put out of the play men on the defense who hitherto had used up two interferers. Percy Haughton, the head coach, was able to build up an extremely advanced and effective attack, since he had backs who often could do the work in interference allotted in former years to a tackle and end, or a pair of backs. This was a tremendous advantage and a great factor in Harvard's success against Princeton and Yale.

In the course of progress toward a touchdown the backs that are worked into the interference are expected to put out of the play not only the backs of the secondary defense, but line men who may be left uncovered in the course of the run, and these line men are often uncovered nowadays, since the old method of boxing the defensive tackle with the tackle and end is no longer in such high favor. The tackle in the modern game is often called upon to put the defensive end out of the play, while an interfering back and the attacking end take care of the line man, generally

the tackle, and occasionally the guard or "roving" center. It often happens that the back is expected to handle the defensive tackle alone, which is something of an undertaking for any but a big and rugged player.

It will be seen readily enough, I think, that in attack the value of weight and strength is hardly to be overestimated, and that the big men who are not too slow, or who can be speeded up by hard coaching, must have the call in the backfield as well as in the line.

The needs of the defense, save when facing the forward pass, where speed and agility count, and in running back kicks, would seem to be about the same. The tackle is obliged to bear the brunt of the attack, as has been the case for many a year and under all sets of rules, but against a more consistent running game, with its added down, there is more work cut out for him than has been the case since the days of the massplays and the heavy tandem. In almost every play there is the threat of the forward pass, short or long, of the quick kick under the line, the kick from the regular formation, with the kicker five yards behind the line of scrimmage, or the long, sweeping run from the standard kick formation. In order to cover all this, the defensive back will have to take plenty of room behind his line, and get out pretty far laterally, so that the burden of breaking up the play and nailing the runner falls heavily upon the shoulders of the tackle and end, but more especially upon the tackle.

This hard working player experiences a sense of loneliness greater than in many a year, for the attack has three cracks at him instead of two before being forced to kick, and the wear and tear is great, despite the fact that the player is relieved of the duty of standing up against the massed attack of some years ago. Whether the end plays the smashing game, going in fast to break up plays in their inception, or runs in a short distance and waits for the play to develop,

his work is increased almost to the same extent as the tackle's. He too should be big and rugged if he is to stand up under the hammering.

The same arguments apply to the defensive backs, who because of the necessity of covering a great deal of ground against the forward pass, and quick kicking, must come up fast to the assistance of the tackles, must stop a heavy back if the tackles are smothered in the interference, and because of the smaller average gain required, must stop him in such a way that he will not be able to add his own length to the run. This means heavier work than under the rules in the years immediately preceding the season of 1912.

One of the most important positions to settle as early as possible is that of quarterback, which will be occupied by the man who is to run the team under fire. Happy the coach who knows that he will have a quick and logical thinker or two to depend upon from the outset. Many a quarter, promising so far as speed, running back kicks, and handling the ball were concerned, has lost his place to a man who has had little more at command than sheer headwork and the ability to inspire his men. Thus a plan of campaign built around a physically strong quarter will have to give way to a scheme that depends upon a man who can use superior headwork. The diagnostician, who is also something of a pest to the bigger men of the squad, is usually the right man for quarter—the man full of brains and fight, a none too common combination on the gridiron.

There will be times when because of some injury to a star or pair of stars, the plan of campaign will have to be remodelled early in the season, or perhaps even late in October; but as a rule the good coach completes his plans in September and sticks to them thereafter as closely as possible. Better to be defeated by a small college team than make a hasty change in the campaign that leads up to the big games. The following of this system is what sometimes makes the

big elevens appear rather ordinary in their early games, only to find them making a remarkable showing in the final clash. All other things being nearly equal, the better material will win in the long run, and it is the glory of the game that it is swinging so close to a standard as to permit of this result.

Roughly speaking, heavy material lends itself especially to the running game, while light is especially adapted to the "loose ball" style, which means plenty of kicking and forward passing, mixed up with wide end runs. The advantage of the heavy material is, however, that it can be trained in both styles, if it is well equipped with brains, and variations in the standard play need be made only in providing a special "punch" for points in line and backfield that show especial initial strength. With big men the coach must resign himself to slow development, while in the case of fast, light material, the problem is to keep the eleven from getting on edge too soon, or to hold it there sometimes a week or more after it arrives at the top of its powers.

In most cases I believe it a good plan for the head coach to take his squad to the training table as soon as possible, in order that the men may become thoroughly acquainted, and in the interests of that "football family" of which I spoke some pages back. A great many football players are keenly susceptible to a system of rewards and punishments, and the training table provides very neatly for both. It is not so important that the diet be especially looked after early in the season as that the "aristocracy of the 'varsity'" as some clever coach has called it, be maintained at all costs. Football, 'varsity caliber, is for the fit and the strong, and whatever those of us who believe that gridiron stars are rewarded above their deserts may say; the atmosphere of the training table makes for efficiency in team play, and in football generally.

CHAPTER V

COACHING SYSTEMS AND ASSETS—SCOUTS AND "BLEACHER" COACHES

No coaching system can endure that is not founded upon truth-telling among the men who have the team in their hands. When one man of the staff stands alone in his opinion about certain measures or certain plays, there should be nothing in the attitude of his associates that would lead him to think that it might have been better after all had he fallen in promptly with the consensus of opinion, relieving himself of all responsibility and retaining that connection with a team that is so highly prized by many a graduate. Nor should a man who is personally unpopular be deprived of his right to speak, which, presumably, is guarded by his connection with the university or college and the broad democracy that should be the keynote of college sport. Many a man who is *persona non grata* to the main body of the coaches may have the remedy for something that has afflicted the team, and his advice on technique may be the very thing that is needed in the darkest hour before the big game.

Unfortunately older men are quite as apt to be moved by friendships or antagonisms as less experienced undergraduates. Their influence after graduation is to them quite as great a treasure as their influence in the class in undergraduate days, and I venture to say that it is harder to harmonize a lot of graduates of varied interests than it is to get together a lot of boys over whom still hangs the glamour of the great university. A large coaching staff is too often apt to break

up into cliques. Almost every big Eastern university has had experiences of this sort, and they are apt to recur at what are very close to stated periods. When disorganization of this kind occurs it generally means the loss of the big game, although rescue may come at the eleventh hour, and in a general falling off in the system from which it may require two or three years to recover.

The absolutely ideal coaching system has yet to be discovered. Dean Briggs of Harvard has made a plea for the "practical idealist," and it is indeed such a man that every university is seeking, consciously or unconsciously. He is, however, as rare as the white rhinoceros, and until he appears, and in numbers, coaching systems, like most other university activities, will be no more than human.

The nearest that any university seems to have been able to come to an ideal is the institution and support of graduate coaching, and when such coaching turns out successful teams there seems to be no quarrel with it. But let it plunge into a year or two of disaster, and there is at once a wail from all quarters, graduate and undergraduate alike. Certain of the larger institutions are able to weather these storms and maintain their systems, but those institutions that have not years of football behind them are forced to look elsewhere for their technique. It is said of them in such circumstances that they have "lost the dope," and that means they must get it back through outside aid. The larger universities with years of tradition behind them know that they will only have to shuffle the graduate combination and deal out new sets until the right one is found.

Presumably—this from the viewpoint of the idealist who believes there should be pleasure in coaching as well as in the game—any former 'varsity man should have the right of contact with the team, or at least with the coaches handling it. The particular squad has been chosen, of course, but the idea is that any old player who returns in

the course of the fall should be called upon for his advice. It sometimes happens, however, that someone of these old-timers has played on a badly coached and badly beaten eleven, in which case his advice will not be worth much on the face of it. The coaches who are in contact with the team should be, as a rule, men who have made something of a success of their own football careers. It has been said that nothing succeeds like success, but it might well be added that nothing impresses like success, and this impression goes a long way with the men who are trying for the team.

One of the greatest problems of the graduate system, therefore, has been to make use of men who on the surface are useless and at the same time maintain their interest in their university and its teams by carefully avoiding driving them away. The problem has been solved to some extent by turning them into "bleacher" coaches and scouts, of whom I shall have more to say farther on.

There is one more problem of the graduate system that has made a deal of trouble from time to time and that is the question whether the head field coach should be selected from the ranks of the younger men or from among the old-timers. Yale has recently abandoned the system of making the captain of one season the field coach the following year, and other universities gave it up long ago. The system survived at Yale as long as it did probably because the young head coach received such solid and capable support and usually proved tractable. Any football man will tell you that no man who has played football four years at college, and has had no further experience is fit to put in charge of a great coaching system. He makes a good coach for another and smaller college with great frequency, but it is certain that he has not mastered the sum of the football knowledge of his own university's system and is therefore not able to make the best of the advice he gets from the old-

timers, or distinguish always between good advice and bad. Furthermore it is quite natural for him to turn to the younger body of coaches for this advice, and overlook the ripe wisdom of the men of years ago.

Let us suppose that Smith, having been captain the year before, has been chosen field coach. In selecting his staff what more natural than that he should turn to Jones, a team mate of the year before, whom he knew intimately off the gridiron as well as on. At this stage Brown, an old-timer, steps in and offers help. If Jones and Brown disagree on some vital point it is safe to say that Smith will accept the decision of Jones as final. Brown means less to him than Jones. Brown may be right, but Jones is younger, presumably more up to date, and already has won Smith's confidence. But should Smith in his dilemma refuse to accept the opinion of either man as final he probably will turn to the oldest graduate who has had the steadiest connection with the team, whether as an active coach or a theorist. Both of the other men are apt to resent it, and in the case of the old-timer he may feel that the man turned to has had quite enough to do with the game at his university in the past. Promptly there is trouble, the older men split up into rival camps, and the last stage of that young field coach is worse than the first.

On the other hand should the field coach be an old-timer he may be in reality a trifle unprogressive, as was the case in many of the larger institutions at the time the first radical changes were made in the rules, and he also may be quite as apt to gather around him men of his own time as the younger man. Somewhere, then, the link between the older and the younger coaches must be found, and when such a man is discovered it usually happens that his personal business is in that stage that requires all his time, and he has fewer spare days at hand than either the younger or the older man. What happens then? The man in question

either lets his business go to pieces, or seeks indirectly to make money out of his connection with the eleven. No matter how it may be glossed over this latter move is always discovered sooner or later, and it leads to a state of unrest that eventuates in open mutiny. It is this more than anything else that has made it necessary to make football coaching a business, as at Yale, Harvard, and many other institutions where a salary is paid, and to leave no stone unturned in the effort to dignify that business.

When it is remembered that the head coach has a tremendous influence over the characters of the youngsters under him it will readily be seen that any steps to dignify his salaried position are well worth while. Complaint has been made by the well-meaning gentlemen who occupy the sheltered situations of editorial writers that the football coach draws a larger salary than the learned professor. But the coach is giving some of the best years of his life to coaching with the certainty that after a little time he will have to abandon it and go back to some other business, whereas the professor is already settled into his life work. I have no desire here to revive an ancient controversy but merely to emphasize the difficulty of finding the right man, and to explain why he earns what he receives, and to drive home my belief that it is an honorable profession.

There are instances in which it has been possible to combine coaching with faculty duties, and this is an excellent system, one, indeed, that seems to have worked superlatively well at Andover. In any case it must be remembered that the field coach is in closer contact with a larger section of the undergraduates than the non-coaching member of the faculty, and I know any number of instances in which he has helped mould the character of the young undergraduate for the better. He is teaching a game that should bring out the finest qualities in a young man, and has an opportunity enjoyed by few other educators. A coach of high char-



THE DEFENSIVE LINE IN ACTION

The picture shows an Exeter-Andover game. Exeter has the ball and has started a run. Andover's line (on the right), has charged to meet the play. The line, as far as it has gone, has done its work well. The Andover backs are closer to the scrimmage than is usually the case.

acter, and there are many in the field to-day, will go a long way in patching up the old feud between the faculty and the undergraduate athlete.

The permanent field coach usually requires about a year in which to get rid of the old methods, and by the end of that time is able to coagulate the best graduate coaching around himself, not barring the apparently useless old-timer entirely, or treating him with scant courtesy, but giving him a chance to help in one way or another without actually getting in the way, while binding the really useful veteran and the best of the younger men to him with hoops of steel.

If this head coach of whom I am speaking is wary, he will see to it that there is enough of the younger element on his coaching staff to keep the undergraduate body closely in touch with the squad, for it is fatal to have the team "get away from" the students, for whose benefit, after all, the game is played.

The "bleacher" coaches and the scouts need not feel that they are any the less valuable if they are not called upon for active work on the field, for the work of two of these "bleacher" coaches had a great deal to do in winning a game against Harvard for Yale not so many years ago. The "bleacher" coach sits in the stand, pretty well up toward the top, at his own field, and as a scout, occupies the same position at other fields. Of course a Harvard captain and head coach will go together at least once in the fall to see a Yale team play, and vice versa, but there are usually enough capable volunteer scouts to keep an eye on the most prominent rival throughout the season.

This is by no means a case of secret espionage—scouts and coaches of the big elevens no longer stoop to that sort of thing—but open visiting, and as a rule the visitors are quite welcome. Apropos of this a good and a true story is told of the visit of the head coach of an Army eleven to

Annapolis the week before the annual game. The Army man had hoped to get one last look at the Navy team in action against Pennsylvania State College. His disgust was great when, from the side lines, he saw the Navy sending an entire eleven of substitutes against the visiting team. After the game, at the officers' club, the Navy coaches welcomed their rival strategist and asked, "Well, what did you think of it?"

"Think of it," retorted the deeply pained visitor, "why I came down to see this team of yours that they tell us is such a wonder and you send out the second eleven. Is that what you call Southern hospitality?"

The capable scout watches not only elevens that his own university is to meet, but also has a look at other elevens that seem to be doing promising work. He turns in all the information, or "dope," he can get, good, bad and indifferent, and it is weeded out by the head coach and his assistants. But of course the principal excuse for his existence is keeping an eye on the most important rival.

A few years ago two Yale scouts sat in the Harvard stadium watching game after game played by the Crimson. The active Yale coaches had seen the Harvard team, but these scouts picked up some valuable points that had been overlooked by their superiors. Minot was doing the kicking that year for Harvard, and he was kicking well. The Yale men made a study of his work, and after a time became so expert that they could tell nearly every time just about where the ball would land. Minot had a "drift" in direction, to be compared with the drift of a rifled gun, something that in shooting is corrected by the rear sight. The scouts went back to New Haven and found that in Yale's system of defense against the kicking game, Philbin, the strongest runner back of kicks that year on any eleven, was so placed that Minot would be kicking away from him much of the time. In consequence of this scouting a change was made,

and Philbin was so placed that Minot's punts would practically come to him. Philbin's running back of kicks in the Harvard-Yale game that year was a tremendous factor in Yale's victory.

In studying their own eleven the "bleacher" coaches will pick up many a little point that needs correction, and that is not so readily discovered by the active coaches who are standing on the field on the level with the team. Natural tendencies of the players are accentuated when seen from this high position, as explained in the chapter dealing with football for the spectator, and mistakes in judgment, especially in the positions assumed by the secondary defense, stand out clearly.

These scouts and "bleacher" coaches when carefully handled by the field coach, are valuable assets to any team, but at least once a year there should be a general exodus of the active coaches to the field where the principal rival is to play a really hard game. The rival will of course confine itself to the simplest brand of football, and will show nothing new, but by the time a really hard game is reached, the team should be well enough together so that it will reflect in a general way the type of the coaching. Some inkling of the plan adopted to cover certain parts of the field have to be shown, and if the eleven is to make much of the run from kick formation, for instance, it will be apt to be foreshadowed. I do not recall many instances in which one eleven profited in the final game through advance knowledge of any "trick" plays planned by its rival, but a general idea of the opponent's methods has frequently come in handy. Special defensive formations may be devised against especially dangerous men on the opposing eleven, and if there is a drop-kicker to be faced a study is made of the protection afforded him in the hope of planning some way in which to block his kicks. In 1901, for instance, both Princeton and Harvard went to extremes when menaced by

drop-kickers in their game, putting the secondary defense right up on the line in the hope of blocking the kick. Two kicks were blocked by this risky method, and one of them was turned into a touchdown when Sanford B. White of Princeton picked up the ball and ran eighty yards or so.

One of the greatest assets of a big coaching system is the number of graduates who are coaching smaller college teams both East and West. These men do a great deal of experimenting, and their elevens also frequently play against teams that will eventually meet their own alma mater. They send in full reports on the work of these outside teams, and get from the eleven they are coaching pointers on the strength and weakness of teams that are to be opponents of their own university, which can be gained in no other way. It may be, too, that some one of these men has struck out for himself in building an attack and has made a success of plays that have not been tried or understood at his own university. In such a case he can teach the plays to some emissary from his own university, and thus help the team, even in the eleventh hour.

Dr. H. L. Williams, for instance, who has been coaching for some years at Minnesota, has been one of Yale's great assets. Active coaches are sent from New Haven to study his methods and his plays, and it was his shift play brought East by T. L. Shevlin, the famous Yale end, that not so long ago enabled a disorganized Blue eleven to get together and defeat Princeton and fight Harvard to a drawn and scoreless battle. The shift as applied to the Yale team was not made exactly as it was at Minnesota, but it employed the "jump" principle that is the foundation of many of the later shifts.

Yale and Pennsylvania have led in recent years in the number of men who are coaching other teams, and these men have been of considerable assistance to the active coaches at New Haven and Philadelphia, while Princeton's

outside coaching has not been so noticeable. In W. W. Roper and "Phil" King the Tigers have two men who have had a great deal of outside experience, handling teams in the middle West, and these men have a broad view of the game. Dartmouth is also well to the front in supplying coaches for other colleges, and this has proved a help at Hanover, for because of the geographical isolation of the Green at Dartmouth coaches have not had many opportunities to see the work of other elevens.

There has been in recent years an interchange of opinion among coaches both East and West that has been one of the delightful features of the game. Fielding H. Yost of Michigan is a frequent visitor in the East, where he picks up pointers on the latest methods as applied in that section, while at the same time talking freely about his own ideas of open play. The Yale game at West Point has always brought together more coaches than any other early season contest in the East, and these men have talked more frankly and freely than was the case many years ago.

There is probably no one man who knows all the football there is to know, and the interchange of opinion has made for better football all over the country. It is safe to say that the average coach, even of the smaller colleges, knows more football than was the case ten years ago, and it may be added that his mind is more open than it used to be. The first year the forward pass came into the game the coaches at Dartmouth clung to the old-fashioned line-breaking style of football and paid little or no attention to the new open method, while the Princeton coaches experimented with the new plays and made much of them. The result was that when the two teams came together Dartmouth was badly beaten even though the material, considered individually, was quite as good as Princeton's. The Dartmouth coaches of to-day do not make that sort of mistake, for they are keen to learn what the other elevens are doing and what

the other coaches think about the more advanced style of football.'

It is the duty of a capable field coach to keep in touch with men of his own university who have gone out to coach other colleges and to seek their aid and the benefit of their observations. These men should be and in most cases are made welcome when they return to their alma mater, for they have been learning since their graduation, and being obliged to coach without much if any assistance, usually have attained to a broad knowledge of the game.

Most football squads under modern coaching systems consist of the first or 'varsity eleven, and the "scrubs," the latter term embracing all other players. In some of the more progressive institutions of the East, however, an attempt has been made to get something like organization in the squad that is left after a tentative eleven has been chosen. A second eleven that is a constant quantity, with its own signals and plays, will have a greater esprit de corps than a loosely organized "scrub," and may even play outside games against the smaller colleges and the larger schools. At Harvard, since the advent of Haughton, there have been practically three teams, the 'varsity, the 'varsity substitutes—a full team—and the second eleven. The system seems to have worked well, and to have provided the first eleven with the necessary strong opposition. The fight for positions under such a system seems to be quite as earnest as under the old method, and Harvard's elevens of recent years have reaped the benefits.

The old term of "scrub" is beginning to lose its sting. To play on the "scrub" did not mean that a man was a poor football player, merely that he was not quite up to 'varsity calibre. A well organized second eleven gets more rewards for faithful work than was the case in the past. Were the second elevens of all the big universities to meet annually there would be some fine exhibitions of football.

Another help in the way of organization has been the one-year rule that keeps freshmen off the 'varsity teams of most of the big institutions. Freshmen of 'varsity calibre often have been extremely difficult to handle. The glamour of 'varsity football too often has gone to their heads and spoiled what otherwise would have been promising gridiron careers. Under the present system the freshmen teams have a competent coach, and achieve that organization so much to be desired in any squad. In tuning up a 'varsity team for its big game it is a good plan to send it against the freshmen now and then for a full game. These are players with whose work the 'varsity men are unfamiliar, and they get as much benefit out of such practice as they would from playing a game with another college team.

The next step in this general development, I believe, will be intracollegiate football, somewhat on the Andover system. Meetings between the various colleges of any university may be nearly as earnestly fought as intercollegiate games, but they provide the greatest fun for the greatest number, and football is too good a game to be confined to those who are seeking the 'varsity letter. Both Andover and the Army have shown what can be done in the way of developing their own players, even from third and fourth rank to first.

At West Point there has been a third eleven known as the Cullom Hall team, from the fact that it practised in front of that memorial building, and this third team has been under competent coaching from the beginning of every season. The team plays games against the best school elevens along the Hudson, and has made an enviable record. Occasionally the team goes in against the 'varsity and gives it excellent practice, while from time to time one of its players has been taken over by the 'varsity squad. In teams of this class, where the coaching is of the first order, there is every chance of development, and the mere organization of such a team helps the football "atmosphere" at any

institution. The more teams the merrier. They keep the non-playing undergraduate closer to the game than was the case years ago, and they will be factors in producing, in years to come, a highly intelligent group of spectators.

One of the best results of the Andover system is the fact that the boys have learned to do a deal of thinking for themselves. Sheer necessity, under such a system, has spread the knowledge of generalship and made the game attractive to the main body of the students. All these things come under the head of "assets" that are welcomed by any coach. The coach who goes from a great university to a small college often complains that he has not enough men in the field to provide two elevens for practice, and that as a result he sometimes has to play one side of the 'varsity line against the other and resort to other makeshifts in order to accomplish anything. The remedy for this state of affairs, I think, lies in the development of class football, and he is a wise coach who begins building up such a system in his first year's work, even if it robs him of some of the time he thinks should be spent with the 'varsity. Defeats will be in order at the start, but in the end the system will yield victories, and in any event well grounded teams that will play good football whether winning or losing.

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CHAPTER VI

SIMPLE ATTACK AND DEFENSE—STANDARD FORMATIONS

THROUGHOUT October the big elevens play only the simplest football, in order that the material may be brought to a high state of efficiency without, through the medium of complicated and advanced formations and plays, taking the minds of the men off their individual work, which at this stage of the campaign is paramount. But since through this month many games, perhaps one or two rather hard ones, will be played, the team must have a set of fairly effective plays. On attack six, or even fewer, of the fundamental formations ought to suffice, with a simple kick formation, one or two forward passes, and a fake kick. The greater part of the time of most of the men will be put in on the defense, for the first object of a football team is to keep its opponents from scoring.

Right here there is a sharp division of opinion between East and West. The Westerners argue that "the best offense is the best defense," while the Easterners maintain that, if an eleven can count upon keeping its opponent from scoring, nothing worse can happen to it than a scoreless tie. When Western teams meet the Western theory seems to be satisfactory since both are coached on the same fundamental line, but it frequently happens that when a good Eastern defense meets a good Western attack there is a sudden cessation of Western scoring. The rule does not hold good in games between Michigan and Pennsylvania since this particular Eastern team has for many years been

noted for a fast and versatile attack rather than a sound defense.

There is no doubt, however, that in recent years the Westerners have done more in the way of building up a defense than when the game was young in that section. It has been a slow process, for attack has always had an extreme fascination for the hustling Westerners, and the other side of the game, apparently failing to enlist much interest, has not been sufficiently emphasized. The East may learn a few things from the West on attack, while on the defense the situation is reversed.

There is a growing feeling among the best coaches that both on attack and defense, since the shifts have gained rapidly in popularity, and since the defense must shift rapidly to meet the shifted attack, thus bringing the defensive players opposite new faces from time to time, it is a good plan to remove the emphasis from the nomenclature of the positions. In a shifted attack and defense the defensive tackle will find himself sometimes facing an attacking guard, an attacking center, or even an attacking end. If he has rooted in his mind the fact that he is a right or left tackle, as the case may be, instead of an all-round forward, to be played wherever the shifting fortunes of the game command, there will often be a hesitancy in finding his place, and a consequent falling off in his efficiency as an individual.

He will be apt to take his position with relation to another player in his own line, rather than with reference to the changed position of the attacking forwards. A small matter, it would seem at first glance, but a formidable one in the light of practical experience. Much the same thing is true of the attack. Under modern conditions the distinction between right and left halfback is often wiped out, and the four men behind the line become simply plain backs to be used in varied formations regardless of the side

of the line behind which they take their positions. On defense the backs usually follow the right and left system, but the forwards often find themselves well out of the normal, balanced line-up in which they began the game.

There are occasions, too, when because of individual peculiarities, the guard and center change places on the defense, or upon which it is deemed advisable to "twin up" guards or tackles in order to strengthen the weaker side of the line. The concensus of the best opinion, therefore, leans to the numbering of the positions, so that the men are called upon by number rather than by title. But since the balanced formation is still very much in the game, it would be well to use even numbers on the right side of the center and odd numbers on the left. This system has been followed in the accompanying diagrams. The center is numbered 1, and the left guard, tackle and end are numbered 3, 5, and 7, respectively, while the right guard, tackle and end are numbered from the center outward, 2, 4, and 6. Left halfback is No. 9, right halfback No. 8, fullback No. 10, and quarterback No. 11. Thus, Jones is told to "go in at No. 5" instead of at left tackle, and Smith is ordered to "go in at No. 11" instead of quarterback, and so on throughout the team. These numbers may or may not be worked into the signal system, but I am not convinced of the advisability of numbering the players for signal purposes, and believe that the *plays* should be numbered, save in the extremely early part of the season, when numbers for the players and the openings may be used to advantage, thus making matters as simple as possible for the candidates, who have enough to think of in absorbing individual coaching without becoming involved in a complicated signal system.

In considering attack and defense of the fundamental order I shall follow the Eastern system of beginning with the defense. There is less clash of opinion both East and

West over defense than over offense. The principal disagreement seems to rise out of the system of using the center and the ends. Some coaches prefer to keep the center always up in the line, depending upon his work in breaking through and closing up openings in his own position and through those occupied by the guards on either side of him. Others cling to the theory of the "loose" or "roving" center, at least between the two twenty-yard lines and on the first three downs. Nearly all coaches send the center up into line when it is obvious that the opponents are about to kick.

There is a great deal to be said for the "loose center" theory, especially if the player in question be not too heavy, and very fast, as well as quick in diagnosing the plays. In the diagram, Fig. 1, the normal attack and defense formations of two teams playing the "balanced game" are shown, and in this instance the White center is playing in the loose, or roving style made famous by men like Congdon and Ketcham of Yale, Grant of Harvard, as well as Torrey and other well-known Pennsylvania pivot men. Indeed, so far as I can learn, the credit for the innovation belongs to the Quakers, though in that I may be mistaken. It requires no more than a glance at the diagram to realize the advantage in range of the "loose" position, provided the defensive center be clever enough not to be drawn away from his immediate post by false attack, and fast enough to get out and tackle as far as the ends.

I do not recall any man in recent years who has made more of this style of play than Ketcham, the husky Yale captain of 1913. A natural diagnostician, he was helped greatly by the post he assumed in that it enabled him to look over the line from his "stand-up" position and get a fair idea of the ultimate as well as the immediate objective of the play. A large proportion of the line plays that go outside of guard are temporarily checked, and the roving

center has time to get up to the mass and lend efficient aid in bending the play back or piling it up. It was Ketcham, indeed, who in 1911 performed the all but incredible feat of catching a kick blocked by his own team, which is certainly a stellar example of covering ground from the pivot position.

Roving center play is not for the man who tips the scale above 200 pounds or so, and the player who is not gifted with speed remotely comparable with that of the startled antelope would do well to adhere to the orthodox method.

There is a radical change in the situation on the fourth down, when the attacking team will be compelled to kick, or back of the 20-yard line, where every effort will have to be made to break up plays behind the scrimmage line, and where the attack will be less given to attempting what are known as the "long gainers," plays that if they make ground at all are apt to earn all the way from five to fifteen yards. In such circumstances the roving should give way to the fixed center, for in the orthodox position the center has the shortest path to the runner when the play is in its incipency, and may depend upon his guards to make a hole for him and let him through on top of the attacking quarterback. It is behind the 20-yard line that it is advisable to bend every effort toward throwing the attacking team for losses, thus hurrying the inevitable attempt for a field goal, and perhaps compelling it from a position that presents an awkward angle to the kicker. In this zone everything possible should be done to force the hand of the attack, and the center should be in the forefront of the battle.

The possibilities of the roving center in other parts of the field, like the possibilities of the general "stand-up" defense, depend upon the possibilities of the individual player. The fast, strong man, who can keep his feet, may stand up and may play the loose defense; all others would

do well to get down low, keeping their backs straight, and "get into it."

In the diagram of the line-up the men on the attacking line are shown at even intervals the one from the other, which is the customary style, save that the three center men are often more closely bunched than is possible to show clearly in the drawing. The defensive guards are well outside the positions occupied by their opponents, and the defensive tackles, taking plenty of room, are always careful to post themselves well outside the extremities of the opposing line. Save in a flank movement of the attack, which in football is an end or tackle run, and in which the full force of the secondary defense swings into action, the attack naturally works along interior lines, and this is accepted by the defense, which seeks to envelop the attacking force. The fundamental idea is to close up the attack, shut it up like a fan, and the tackles are relied upon to keep the play turned in. This is the generally accepted theory.

The clash among the coaches comes in the consideration of the best use of the ends. There are two radically different styles of end play, the "smashing" and the "waiting" end. With halfbacks playing outside the extremities of the defensive line, it is contended that the tackle may be depended upon to take care of the plays that swing wide, while the end goes straight in, careful to keep his feet as long as possible, to tear the play apart in its incipency. There are thus two separate impacts with the attack, the first starting as fast as the play and meeting it behind the scrimmage line and while still in the process of formation, the second meeting it after it has been disorganized to some extent by the end, when it reaches the line of scrimmage. This double impact is in itself immensely effective according to the devotees of the smashing end style, and has the added advantage of acting as a double delayer in the event that the play cannot be stopped entirely by the forwards, thus

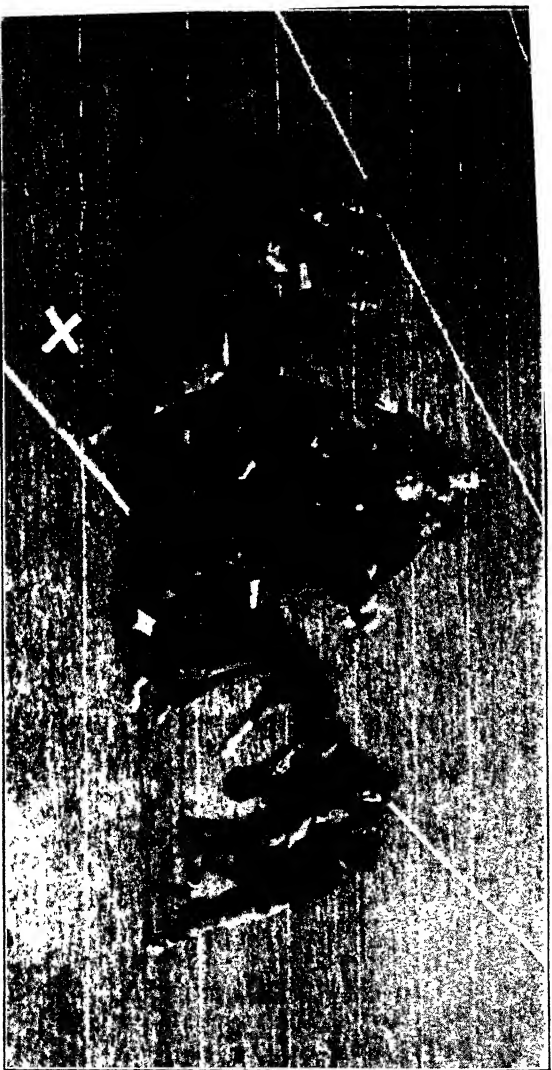


Photo. by Paul Thompson.

MEETING INTERFERENCE

A Harvard-Yale game incident. The tackler, indicated by the cross (X) mark, has "set" himself to meet the runner, and has the advantage whether the run is to be inside or outside of his position. In either case he interference will not be able to upset the tackler.

giving the secondary defense an excellent chance to get up to the line of scrimmage from positions pretty well back of it.

The theory has been pretty thoroughly tested in important games by first-class elevens, and has proved sound, to my way of thinking. In the diagram, Fig 1, the course of the smashing ends, who play close to their tackles, is indicated by the solid arrows. Proponents of the waiting end style (their course indicated in the diagram, Fig. 1, by the dotted arrows) claim greater safety for their method, and maintain that by this system more plays will be stopped at the line by ends who do actual tackling with greater frequency than by the smashing wing men who, when not in position to tackle, must devote their entire attention to disorganizing the play as much as possible, so that nothing but a wreck shall reach the line.

Now it happens that even in the normal attacking formations the aggressive eleven will "waste" an end, in the hope of drawing wide a tackle who is playing the standard defensive position. This process will seldom trouble a well-coached defense, for the experienced tackle will refuse to follow his man out, but is often a stumbling block to smaller, especially schoolboy elevens, which seem to have a horror of letting a man go free outside the extremity of the line. As a rule the end should follow out a short distance, using his judgment as to when to let his man go free, the tackle standing fast, but should two members of the attacking line edge out, the end should take them just as far as they will go, for the defense is then wasting only one man to two of the attacking force, better than a fair exchange. A wasted end goes out for one of two purposes, as a rule; either to take a forward pass, or to act as a bluff to call attention away from the actual play. It will be seen, therefore, that to send a defensive end out with him is to waste one of the strongest features of the defense against a man who may

have nothing to do with the play, and who at the worst will handle a forward pass, the defense against which is entrusted to the halfback, who has sufficient range to cover the loose end if necessary while the attacking team is making the preliminary delay which is one of the fundamental features of all forward passes. With the exception noted, therefore, the fundamental rule of line defense is to keep the tackles outside of the extremities of the attacking line and the ends close to them.

Since the restriction has been removed from the kick there is the threat of at least a short kick in every play, and since the necessary delay to make perfect the forward pass requires only that a member of the attacking backfield run back to a point five yards behind his own line and that "eligibles" move down the field, it may also be assumed that the forward pass threat also exists in every play. This means that the secondary defense will have to take plenty of room in which to work, thus being prepared to meet every possible form of attack.

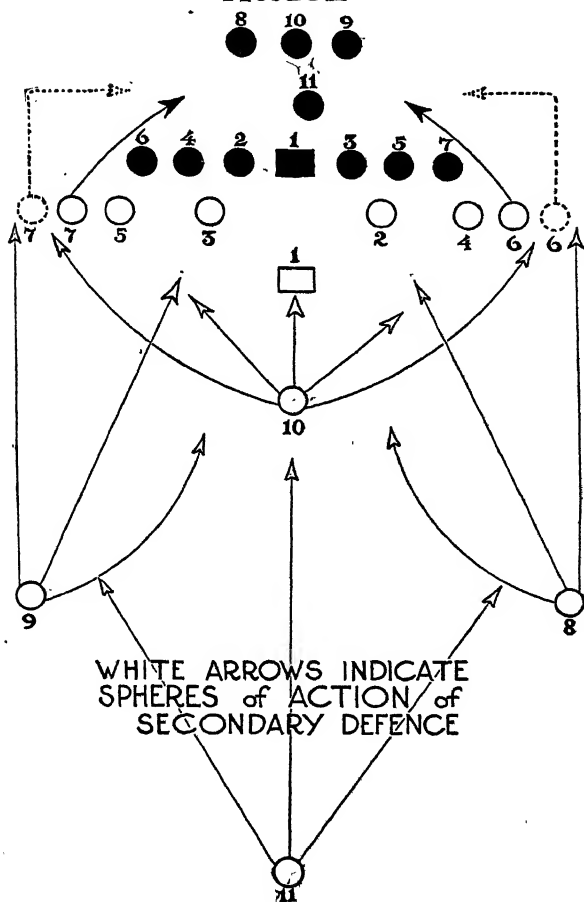
The loose center stations himself about a yard to two yards back of the line, the fullback, usually the heaviest of the backs, about four yards from the line, and the halfbacks from ten to twelve yards behind the line of scrimmage, and outside the ends of the defensive line. The quarterback, the last man in the defense, posts himself from 25 to 30 yards back of the scrimmage line. These relative positions are shown in the diagram, Fig. 1.

A defense so arranged is the nearest to perfection of anything I have seen against the normal attack. Defense against the kicking game and against shifts is treated at length in another chapter. It is necessary here only to emphasize the fact that the defensive players take position mainly with reference to the attack and with only moderate regard to each other. Such a system provides an elastic defense that should be able to meet any normal play and

Fig. 1

NORMAL ATTACK AND
DEFENCE

Attack



most abnormal ones, granting that the personnel is nearly equal to that of the attacking team.

Just one final word of objection based on some years of observation, to the waiting end. His post, in the very nature of the waiting defense, is farther from his tackle than in the case of the smashing end. He does not go to meet the play, and he even takes a circuitous route to his new position behind the opposing line. These moves are made without any idea of getting into immediate contact with the enemy. Should the play cut in between tackle and guard he will have played no part in the defense, whereas a smashing end, with his direct path to the runner, may be able to muss up a play that goes even directly into the center. He is a standing mark for any interference that may be thrown at him, and, since he has no initial momentum, may be carried out at times clear to the side line; worst of all, a play may be shot past so close to his own tackle that he cannot turn and dive into it in time to make any impression. I have seen some of these waiting ends standing like wooden images while the runner turned inside their posts, the attack not even wasting an interferer on them. Again, should his tackle by any chance show signs of weakening, and begin that kneeling defense that is so often the beginning of the end, the attack will be able to shoot plays right over the smothered tackle, the end helpless, in the meantime to get within tackling distance. The smashing end style has been adopted by many of the most capable coaches in the country, and has shown remarkable results under heavy fire. I believe that should schoolboy teams adopt this method their defensive play would improve at least fifty per cent.

It should be clearly understood that the theory is radically different from the old Pennsylvania method of years ago, when the ends were played close to the tackles and sent in to carry the runner out of bounds if possible. The newest

method is a vast improvement on that system and a far more effective disorganizer of the attack.

Turning now to the simple formations that are given to the attacking team in October, and leaving a consideration of the kicking and forward passing games and the defense against them to another chapter, I shall begin with the normal formation shown in Fig. 1, as effective to-day behind a balanced line as it ever was. Indeed, all the formations treated here are made behind the balanced line, although it should be noted that they are effective behind the shifts as well.

One advantage of the old, or normal formation, with the quarter directly behind the center, and the three backs in a row parallel to the line of scrimmage and about four yards back, or even less, is its supreme concentration, and its consequent ability to take advantage of quick openings in the line. In all the formations shown in the accompanying diagrams it is well to keep in mind one general rule, a rule sometimes disastrously violated by even the greatest of the university teams—that in dashes into the line from tackle to tackle, the ball should always pass through the hands of the quarterback, while in runs outside of tackle, and more especially outside of end, the direct pass from the center to the back may be employed, although there is danger in this. Aside from possible fumbling or bad passing, a disadvantage of the direct pass on any run save from a kick formation is that an end is obliged to come around behind the play to make it safe, and his value as an interferer beyond the line of scrimmage is lost. This, of course, does not hold true when there is a back posted behind the man who is to receive the ball, as in the diamond formation, when the recovery of the ball on a fumble or a bad pass may with considerable safety be left to the backs themselves.

Since pushing and pulling the runner have been abolished the normal formation allows an interferer to jump through

a quick opening, with the ball carrier practically on his back, and since so little start is required there is a fair chance to shoot both men clear behind the opposing line. The beginning of the play being so close to the line, there is less danger of the play being spoiled by a tackle crossing over from behind, and the ends are free to cut across and concentrate on the first man in the secondary defense. Or the man with the ball may be shot through alone, the other backs affording lateral protection, while such line men as are not actually engaged in making the opening, may disengage from their opponents and shoot through to smother the secondary; an end, or both ends going on down the field to spill the last man in the defense should the runner succeed in getting clear.

It is perhaps needless to explain that the success of simple plays like these, depending on a back of individual power and speed, and forwards skilled in individual interference, must go with the precision of clockwork, the runner arriving full speed at the opening the exact instant it is made. If the man with the ball is to be sent through first it is sometimes a good plan to further spread the first line of defense by putting eight men on the attacking line.

The whole underlying theory of the play is to begin the run itself and the interference as close to the firing line as possible, and to get the utmost possible execution out of the play after it has passed the line of scrimmage. In such plays, of course, the forward pass threat is at a minimum, save when a man is wasted to make the bluff; but with good, husky material in the line, and quick, heavy backs, there is a fair chance of success. A series of plays of this character will, even if unsuccessful, tend to pack up the defense, both primary and secondary, thus paving the way for a long gainer, which may catch the defense in an entirely too concentrated position.

The use or lack of an interferer will depend entirely upon

the individual capabilities of the backs, and the ability of the forwards to make quick openings. If the forwards are able to make clean openings, if only for the fraction of a second (and they complain nowadays that the neutral zone between the two lines makes this extremely difficult, since it is hard to reach their men promptly) the man with the ball may be shot in at once, but if they are able to barely start the opening it may prove a good plan to throw in a big, powerful back ahead of the runner, in the hope of adding just the necessary amount of smash to split the defensive line apart. Nothing but constant trial will solve the problem.

In the old days when pushing and pulling of the runner were permitted it was a sound rule of football always to send the man with the ball into the line first. This was what a certain famous coach referred to as "putting the power behind the ball." Nowadays it is often necessary to put the power in front of the ball, and this has become increasingly the case since many teams have developed individual interference to a high degree of excellence. Simple end and tackle runs may be made from the normal formation, as they have been in the past, depending for their success less upon complicated interference than upon smooth execution, even though the positions of the back with the ball and the interferers be fairly obvious. These runs may be made from the direct pass from center to the back, or with the ball passing through the quarter's hands, for it is a poor quarter indeed who is kept out of end run interference through the necessity of handling the ball.

With the direct pass, however, the end swinging around from the side opposite to that on which the play is made must be used to cover the play, and so is lost to the interference, whereas with the ball passing through the quarter, he is able to get into action with the tackle or guard as the case may be. With carefully devised plays, the simple, old formation shown in Fig. 1, should account for some

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good gains through the month of October and even later in the season.

The diamond formation, Fig. 2, is a favorite with a great many coaches East and West, especially with those who favor a considerable use of the direct pass from center, to which it is excellently adapted. Like the normal formation, the diamond is well suited to use behind a balanced line, having the regular frontal and bi-lateral threats. It is especially useful in end runs in that Nos. 8, 9 and 11 are already in position to take the direct pass from the center, and No. 10 can easily recover any fumble or bad pass without making use of a covering end, and when stationed five yards back of the line of scrimmage is excellently posted to make the forward pass, the threat of that play, or kick, with the other backs dropping easily and swiftly into the regular kick formation.

The direct pass should never be made to No. 10, to my way of thinking, in any part of the field, and certainly not when the team is deep in its own territory. They still speak feelingly of this at New Haven, for an error of this kind once cost Yale the Princeton game. On the occasion in question the pass was made to Dunn, the last man in Yale's diamond, and as the backs started too soon, and the pass itself was poor, Dunn failed to connect with the ball, and the yellow egg lay loose in the mud for Sam White of Princeton to pick up and carry to a touchdown. Herein lay the chief fault in the formation, the uncovered last man in the backfield. It was also a dangerous play in the part of the field chosen by the Blue for its use, for the ground and the ball were slippery, the Elis knew Sam White's specialty, and the team was much too near its own goal line to take such a raw chance.

With the diamond formation in action, and carefully covered by an end, the ball may be shot to any one of the backs, who, making a lateral start, is not slowed up even the

smallest fraction of a second. He also finds his interference practically already formed. From this formation the forward pass and the kick may be made with the minimum of excess maneuvering, the backs have no difficulty in finding their positions as they do when the shifts are used, and the plays can be started at top speed. The scheme is an especially good one for a team that boasts the services of a "shadow" end runner with one big back to lend variety and power to the attack.

Another simple formation that has many of the virtues of the diamond is the tandem, either straight or diagonal. Figure 3 gives an idea of the diagonal form. The tandem was especially valuable in the old days, for it was compact, it was not easy to tell which man of the three had the ball, and it had and still has a terrific amount of "drive," for although pushing is not allowed nowadays, the man with the ball may be rammed forward by a series of impacts by the other members of the tandem. The formation also contains the threat of false attack and its consequent "split-off" so successfully used by Harvard when Bill Reid was

coaching the Crimson, and works nicely with the delayed pass.

When the last man in the diagonal is five yards behind the line of scrimmage the formation contains the threat of any play possible under the rules, and has the still further advantage that the order of the men in it may be changed from time to time, being sometimes led by the fullback, sometimes by a halfback. This echelon effect permits of the direct pass from the center when used behind a balanced line, and is very useful as a "jump back" shift behind a shifted line, a play successfully used in recent years by the Navy and lesser teams. With a guard and tackle brought over in front of the diagonal, so that both guards and tackles are "twinned" there is a double threat of a quick opening which is very effective. And this is true whether the line shift be made by the "jump" or "slide" process, or on quick line-up, the last named, I believe, as good as any.

The "L" formation, Fig. 4, is not common, but it has its uses none the less. It contains a straight tandem, which may easily swing into

a kick or pass formation, and which contains the threat of both. From it a sharp drive into the line may be made, and it is very useful for end or tackle runs. The direct pass may be made to any of the backs when the center is a dependable handler of the ball, and the quarter can get into action without any difficulty.

All the formations so far discussed are very handy when the team boasts a good end runner, but when the backs are all big and rugged and the line unusually powerful the situation changes to some extent. In such circumstances there is no better formation, I think, than the simple square, so effectively used by Harvard in recent years, and so widely adopted in the East in 1912. In that season Harvard made the most of it, Yale adopted it but robbed it of half of its efficiency for the greater part of the season by using the direct pass from center on every play, while Princeton ignored it altogether, the Tigers being wedded to the Minnesota shift, three-rank style, which at the speed it was

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andled, suited their purpose admirably.

In the square, Fig. 5, the backs must all be good individual intererers, prepared to take a line man single handed if necessary. From this formation, which reeks with power, a heavy, grinding backfield will wear down anything but the burdiest defense. It is well adapted to shifting combinations, now one back, now another appearing at the "business" corner. It may be expanded and contracted without limit, may be formed immediately behind center, or may take post on the right or left of the middle of the line. The square requires less faith in deception of the opponent than most of the simple formations, and depends for its

success upon supremely good and powerful individual play.

The formation is most satisfactory for sudden drives off the guard position, the runner veering out as he passes the line of scrimmage, or turning in sharply, according as one member or another of the secondary defense is put out of the play. As a rule one of the two "front" backs should be the heaviest man in the backfield. This formation, used as Harvard employed it, with the ball invariably passing through the hands of the quarterback, should provide high-class attack throughout the season—in the big game as well as in October. It lacks bewildering complication and yet is sufficiently elastic to serve for any sort of play, kick and forward pass included.

In building up any formation the coach sticks to simplicity as far as possible, combined with utility, so that the formation becomes a habit with the backs and the men do not have to think consciously about finding their places. Whatever is done in the way of elaboration later in the season must be based on the sound fundamental formations that have been put to the test and not found wanting; otherwise a team will find itself facing its big game equipped with a great variety of plays that require an enormous amount of quick thinking, plays of which the backs cannot be sure, and which are likely to be torn apart by the defense in their incipency. Better a few sound formations with simple plays therefrom, superbly executed by men conscious of their power, than a vast amount of "dress parade" that never gets anywhere.

Toward the end of October, when the players are thoroughly familiar with the groundwork of the attack, and can execute the plays doled out to them as if by second nature, it is time to give the entire eleven more than an inkling of what sort of grand tactics are to be used in the big games. Every man on the team should be taken into the con-

fidence of the strategic coach to a large extent. This is good for the morale of the eleven, inspiring even greater confidence in the coach, in the players themselves, and in their knowledge of the coach's confidence in them. It is at this stage that advanced football begins to be the order of the practice, that the "joke" forward pass used in the lesser games is abandoned, and the finesse of the polished game brought home forcibly to the men. It is the period for which every man has waited and worked from the beginning, and the burgeoning of the larger scheme of campaign cannot fail to instil new life into what by this time may have become a tired team.

There is only one thing to guard against, and that is the premature use of the team's "best stuff." The time may come in a game with one of the big elevens just prior to the all-important match of the year, when golden opportunity stares the quarterback in the face, when he knows that by using one of the plays reserved for the greatest rival he can defeat a lesser, but still a "big" team. The temptation is more than most field generals can stand, and for that reason it may be well to withhold from him the culmination of the "scoring" play, the complete plan, lest he be tempted to use it and thus expose it to the watchful eyes of the scouts from the rival team which it is most desired to conquer. The situation does not often arise, but when it does it would be well for the head coach to be prepared for it in the manner indicated. In a word, no team should be an absolutely finished product, an absolutely polished organization, until the day of its greatest game.

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CHAPTER VII

THE TRAINER—HIS VALUE TO TEAM AND COACHES

FOOTBALL is a game that requires of the player not merely good, but exceptional condition. The man who has done a deal of fairly severe physical work daily, whose muscles are hard, and whose wind appears to be sound, is far from being in fit shape to stand the ordeal of a big game as it is played to-day. Thereby hangs the story of the advent of Harry Tuthill, trainer, at West Point. Because of the strict discipline, the amount of drill and the abstemious life lived by the West Point cadets the young men in gray were expected to tackle a stiff schedule annually, to go through game after game, not necessarily without injury, but at least without suffering from exhaustion on the field. For years the eleven struggled along without the services of a professional trainer, even though those who were in charge of the coaching realized that the cadets were as much in need of special attention, if for different reasons, as the collegians. Year after year the eleven met such teams as Harvard, Yale and Princeton, and stood up famously in the first half, only to yield in the second.

Anyone who had been in the cadet dressing room between the halves in the course of this trainerless period was able to realize on the spot that the services of an experienced man were needed, since the team was generally utterly exhausted after a hard half against older, stronger and better conditioned men. At length the change came. One head coach had been watching for some time the work of

Harry Tuthill as trainer of the Detroit baseball team of the American League. Tuthill was making a record in reducing sprains in a hurry and this alone would have made him extremely valuable to any football team. But the baseball trainer had other qualities, and the West Point head coach at last made arrangements to engage him for the football season.

He arrived at a time when there was a deal of heavy drill work and the daily dress parade winding up with the review in which the cadet corps did a quarter of a mile or so in full uniform and in double time. After the review, so the story goes, the superintendent sent for Tuthill and asked the baseball man just why he was needed at an institution whose young men were already in such superb physical condition.

"Well, I dunno," replied Tuthill, twirling his hat on his thumb, "but if you'll ask these young fellows to run around the block just once more and then ask them to whistle I think you'll find out."

Thereafter the veteran baseball trainer became a fixture, and he turned out better conditioned elevens than had been seen at West Point in years, whether in victory or defeat. What Tuthill did for army teams had been done for years at other institutions: by Jack McMasters at Princeton, and more recently by Keene Fitzpatrick, who had a splendid record at Michigan; by Pooch Donovan at Harvard; by Mike Murphy at Yale, and subsequently at Pennsylvania; by Johnny Mack at Yale, and by Jack Moakley at Cornell. It is true that all these men, save Tuthill, were primarily track and field coaches and trainers, but they soon applied their store of wisdom successfully to football, with the result that to-day, on the eve of a big game, no prognostication of the outcome that does not include a consideration of condition is worth the paper on which it is printed.

To those who do not delve very deeply into football,

however, the trainer has always seemed to be of no very great importance. They see him on the field at many a halt in the course of the big game, swabbing off his charges with a huge sponge, bandaging broken heads, patching up hands, arms and ankles, especially ankles. But of all the hard work of the early season there is little evidence save to the tutored eye.

Yet the trainer is to-day one of the most important cogs in the football machine. The outsider would be surprised to learn the extent to which he is consulted on the most important details of the game. It has been said of Mike Murphy, for instance, that he knew as much about the game as the best of the coaches. He had ideas of his own, too, and they were generally good ones. While at Yale he was a better prophet of the result of the Harvard-Yale game than any one else at New Haven, and picked the score with frequency and surprising approach to absolute accuracy. Murphy's reputation, so far as the general public was concerned, rested largely on his work with the track and field teams, but men who followed football closely esteemed him quite as much for his efforts in the football season. Keene Fitzpatrick made a similar football reputation at Michigan, and Pooch Donovan has long been thoroughly appreciated at Harvard. The men mentioned stand at the top of the heap, but the country is full of good men who are gaining in experience every day and will reach the top when the Veterans settle back to enjoy their laurels.

Now aside from his regular duties in conditioning the team, in apportioning the time each man or set of men ought to be allowed to work in practice, and in bandaging, devising defensive armor and the like, the trainer is of the utmost value to the coach in that he is in touch with the team after it has passed from under the eye of the coach. Both coach and trainer are presumably experts in judging men and their moods, but the trainer sees his charges at

their worst as well as their best. They are turned over to him after a hard day's practice, frequently tired and worn, and perhaps discouraged to the last degree. Once back in the gymnasium they are apt to relax mentally as well as physically, sometimes almost to the point of breakdown. It is in such circumstances that the "yellow streak" is often apt to show, that flinch that is often so well concealed on the field up to the day of the big game. Under the same conditions pluck, too, comes to the surface, and the trainer has a chance to find out why a certain candidate had an off day. It may have been that the young fellow concealed his hurt from the coach fearing that it would spoil his chance of making the eleven. He cannot, however, conceal it from the trainer, who promptly orders him on the hospital list and tells the coach what the trouble has been. A report also goes in concerning the over-tender apparent star who whines about his bruises and demands all the trainer's time while men more sorely in need of attention never raise a whimper.

Again, if something is going wrong with the training table it is the trainer who first discovers the trouble and has the matter rectified. All that close watching off the field that the coach is too busy to undertake falls upon the shoulders of the trainer, and they are generally capable shoulders, whether broad or not.

The inspection and care of the outfits of the players is another duty performed by the trainer, who sees that the material is up to the mark, that pads are properly placed, that shoes are correctly cleated, that protectors of all sorts are doing the work for which they are worn. It was not so many years ago that one of the leading Eastern trainers discovered the reason for the battered condition of the squad after the daily practice after the coaches had been thoroughly baffled. He found that the leather helmets were entirely too hard, that shoulder pads were almost like iron,

and that elbow protectors were also causing their share of bruises. He at once ordered a change in the material, discouraged the use of excessive protective armor, and soon brought his squad into shape again. As a result trainers everywhere began to see the light. Little by little they stripped their men of helmets and other protectors that were hard at least as boards, and found that their daily casualty list rapidly decreased. In consequence, there is really less "hard" armor worn to-day than has been the case in many years.

By the time the big game rolls around, indeed, most of the men have been brought into such sound physical condition that they voluntarily remove many of their pads and dispense with headgear as much as possible, especially in the line. Dispensing with heavy padding adds to speed, and now that the grinding mass plays are no longer in evidence I have known men to go through a big game with almost no padding at all. The noseguard, once so familiar on the field, and still the mainstay of the comic artist, is all but a thing of the past.

No man can play football at top notch unless his clothing is suitable and comfortable, and not one player in twenty-five knows when he is properly outfitted. Suits cannot be passed on from man to man nor the same pad fitted to several different candidates. Now this matter of comfort may be measured from the ground up. Shoes that are worn down too far on one side or with soles so thin that the cleats can be felt should never be worn by any player, and it is one of the duties of a capable trainer to see that the squad is comfortably shod and to complain when necessary to the manager, and even to fight the head coach when the supplies of this sort are not up to the mark. There is the question of wet weather also to be dealt with. Dry suits—from the skin out—must be in readiness between the halves, and long cleats at hand before the game, when the

field is heavy. Games have been won and lost through details of this kind. The trainer is not always to blame, either, for he may reach a strange field and find that no preparations have been made for his team's comfort, and that the dressing quarters are all but impossible.

Pennsylvania and Cornell once played a game at Franklin Field in which ice and snow and sleet figured largely. At the end of the first half the Ithacans were in the lead by a single score. When they retired to the dressing room they found that no provision for heating it had been made, and they had but one outfit of football clothing with them. Their togs literally froze on their bodies, and when they came out for the second half they were all but encased in ice. The Quakers, on the other hand, had made a complete change. The team had been warmed, rubbed and fitted throughout with fresh, dry clothing. In this second half Pennsylvania scored twice and won the game. It would be difficult to convince a Cornellian that his team could not have won the game had it been able to get warm between the halves and to don dry clothing. While it would be too much to expect a Pennsylvania man to admit that it made the difference between victory and defeat, he is usually ready enough to grant that the conditions were unequal to a serious extent. The Cornell eleven should have had the foresight to take along fresh clothing, especially as years of experience had taught them what sort of weather to expect on Franklin Field on a Thanksgiving Day, and there should have been some provision for heating the room in which the team rested between the halves.

Especially in the matter of cleats will the wise trainer look out for his team, for if the eleven strikes a muddy field and cannot stand up, all the generalship in the world and the finest of individual play, will not serve to win the game. On a dry field the cleats should be short but numerous, so that there will be no excess pressure on any one part of the

foot, while on a muddy gridiron three long cleats are generally sufficient.

In 1911 at West Point on the day of the Army-Yale game the field was little better than a lake. Yale should have been prepared with cleats of extra length, the more so as the Blue's entire attack consisted of the New Haven version of the Minnesota shift, while there should have been some means of drying off the hands of the backs from time to time. The preparations had not been made, however, and it was a wonder that the Yale men were not more severely beaten, as the cadets were equipped with regular mud cleats, and were supplied with rosin for the hands and forearms. A pocket had even been sewed into the jersey of Capt. Hyatt, the Army quarterback, and from this he was able to supply his men with rosin from time to time. I am convinced that had the game been played on a dry field the result would have been about the same, but as it was the Yale players were in a more uncomfortable situation than they should have been.

It sometimes happens, of course, that the needed supplies are not forthcoming from a management that may have had a lecture on extravagance read to it, but economy of this kind is of the poorest, and the trainer will have to make a constant fight for what he knows to be necessities.

Nothing but long experience will equip the trainer with a knowledge of protective bandaging, but the old-timer will see to it that his eleven takes the field well fortified at least as far as the important joints are concerned. A sprained ankle is not the terror that it used to be, and can now be corrected in a few days, when years ago it was apt to put a player out of the game for the season, and often just at a time when the coaches felt the need of teaching him a great deal of football in a short time. But it has been found to be wise to see to it that the chances of sustaining a sprain are reduced to a minimum before the game

is begun, and for this reason a bandage is generally used next to the skin, with another outside the stocking. There are various other appliances invented by trainers, and these may be built into the shoe itself. The use of liniments and massage will go far toward hastening the cure of a sprain, but the wise trainer is he who makes reasonably certain that he will have none to cure. I have always believed that protective bandaging was more effective than any amount of padding, and I think most trainers will support me in that belief.

Now when the squad appears for work in the fall the trainer will find that he has on hand men of all sizes and shapes and in all sorts of physical condition, and the problem is to bring this widely differing material to a uniform condition at a stated time. Herein will lie most of his difficulties with the coaches. In the old days there were two widely differing theories, one was to save the men as much as possible, giving them short scrimmages at as fast a pace as possible. This made the teaching slow, however, and also resulted in many injuries, for the men were so fresh and eager to get into the fray that the bumping was harder than their "soft" condition could stand. The other theory was to work the men as hard as possible, giving them long scrimmages. This was a great favorite with most coaches, for they found that they had more time in which to teach. It developed, however, that the men became so utterly exhausted they eventually were filled with disgust for the game and could not keep their minds on the coaching. It is seldom, nowadays, that the players are overworked, for the faculty restrictions have become so severe that the coaches are hard put to it in many institutions to get the men out for even an hour at a time, the two government academies being the greatest sufferers in this respect. Moreover, the scrimmage of to-day is not as wearing physically as the old-time mass plays, and the work for many

weeks is highly individual. It is not that team play is not begun as early as in the past, but that the formations are different, and the individual has a great deal more to learn if the plays are to go smoothly.

Most trainers, after consultation with the coach, insist on keeping the work very light for the first ten days, and giving the same amount to all the men, big or little, fat or lean. This seems to work well while the men are "soft," and it is not until later that the trainer begins to specialize in individuals, demanding of the coaches that they shorten the rest period for one man and lengthen it for another.

In these days of shift plays, both simple and complicated, of forward passes, and of frequent kicking, speed and agility are factors of the greatest moment. With the shifts in use, the players not only have to start quickly, but stop as quickly when they reach their shifted positions, and make a second start as swiftly as the first. This adds to the importance of practicing starts, and means, too, that the greatest care must be taken against overtraining, for while an undertrained team is apt to achieve pace and quick starting as the game progresses, an overtrained eleven becomes slower and slower. Thus it is that the trainer would prefer to see his men go into the big game lacking a deal of work, than enter so thoroughly overworked that they are mentally and physically "dead."

There are temperaments in a football team as varied as any in any other branch of endeavor. The trainer must therefore learn the mental attitude toward the game of all his men, so far as is humanly possible. There is the phlegmatic player, who is a tremendous worker, but too often without "fire." There is the high-strung man, who fidgets and wastes his mental and physical reserve when not in actual action. The former temperament needs keying up, the latter letting down. Trainer and coach may well work together in handling these men. The phlegmatic chap is

more apt to respond to a little humor now and then than to gruelling coaching. His mental interest has to be geared up. The nervous man, on the contrary, needs to have his mind swept clear of all thought of football when not in action or studying signals or some other important matter in connection with the game.

There was a famous line man of recent years who was trying for centre. He already had a reputation in that position as a hard worker and a man who was to be found all over the field. But he took the work of preparation solemnly. There seemed to be no fun in it for him. He was being prepared to meet an equally famous opponent whom for convenience we shall call "Bill." One day the coach showed a little trick of centre play likely not only to be of great value to the team but of great annoyance to "Bill." The veteran listened carefully for several minutes, then a slow smile, the first of the season, lighted up his face. "Gee," said he, "won't Bill be sore!"

The nervous man must have his interest in other things aroused, and must realize that the coach who teaches him and the man who trains him, earnest as they appear to be, can find room in their lives, even at the height of the season, for things other than football. Of such a man the trainer should make a personal friend. The two should be able to get together from time to time to talk over something other than football, and the good trainer has been out in the world long enough to keep a youngster interested even when away from the gridiron topic.

There are of course extreme cases of gridiron sluggishness—men who can be aroused only by harsh measures of an extremely personal kind. Such men are apt to be overendowed with good nature, or to be without ambition. It frequently happens that nothing but a form of ostracism will serve to stir them up. In such an extreme case the trainer continues the harsh treatment of the coaches by

paying practically no attention to the delinquent for many days at a time, by laughing at him even when he is doing fairly good work, by accusing him of "quitting." Humiliation of that kind has in rare cases made a star out of a man who had always had a lot of football in him, but who would not otherwise have shown it, owing to some queer kink in his disposition.

Not infrequently there comes a time in the course of the team's development when the entire squad is in what is known as a "slump." This is usually at about mid-season, and just after the first really hard game against a high-class opponent. If the team has played poorly in the game the coaches will be hungry to get at the men and anxious to lay out the hardest kind of daily work. It is a natural temptation, for the coaches themselves probably will be under fire by the undergraduate body and the alumni. On the other hand, if the team has acquitted itself well in its first serious test, the coaches are anxious to get the team out and by hard work and much coaching show the players that despite their apparently good work underfire they have still volumes to learn concerning football. When the coaches have been allowed to do this the team has gone from bad to worse.

The "slump" is really apt to be due to the fact that the men are "overfootballed" just as a man may be "overgolfed." It is at this point that the trainer should fight for a complete rest for his men. They should have a chance to forget the game utterly for the moment, so that when they come back for the hard work it will be a thoroughly aroused body of men, eager for work, eager for the coaching that will show them wherein they failed, or wherein they may improve on their already good play.

The daily scrimmage, too, is one of the trainer's troubles, for he must watch carefully for the slightest sign of injury and insist upon the prompt removal of the injured man

even though the latter is still anxious to continue. Scrimmages should be short, as a rule, especially where there is much work on rudiments, and the parceling out of the time should be one of the trainer's duties in consultation with the head coach. A man who has been doing a deal of work in the rudiments should not stay as long in the scrimmage as the player who has had no tackling of the bag, catching kicks and signal work to do. It is customary, too, to change the backs more frequently than the forwards, for their work is extremely hard these days, and it must be remembered that scrimmage practice is of value only when it goes at top speed.

As the day of the big game approaches the team will become more and more on edge mentally as well as physically, and the trainer must guard carefully against team as well as individual nervousness. When the last practice is over the trainer must see to it that the coaches do not talk the men to death. There is always a temptation to add something to the coaching. There have been cases, for instance, in which the coaches have kept the quarterback and sometimes other players up too late on the eve of the game, talking over generalship, and aroused them too early on the day of the match for the same purpose. Here the influence of the trainer is again of the greatest importance. The head coach is not infrequently himself a victim of extreme nervousness, and this will communicate itself to the team if he is not kept away. Nothing so quickly unsettles a lot of youngsters as the feeling that the man who has taught them the game is worried over its outcome. One of the assistant coaches, the most phlegmatic of the lot, should be the man to stay with the eleven on the eve of the game.

A trainer will also have his hands full watching room-mates of the players, who should be told to have nothing to say about football the last week before the big game,

and for at least two nights before the battle the team and the substitutes should be kept away from contact with the over-excited undergraduates.

There is great diversity of opinion as to what should be said to the eleven, and by whom, just before it takes the field, and just how much should be attempted between the halves. In this respect the psychology of the eleven itself as an entity must be carefully studied. There are some teams that do not take kindly to a harangue by coach, trainer, or anybody else, while others find it a real stimulant. More speeches were made in the old days, and they were more impassioned than they are now. Personally I can see no reason why the head coach should not talk to the team just as it gathers to go out of the dressing room, but it should be a cool, confident and quiet talk, largely devoid of the old allusions to college loyalty, etc. This leads naturally to a consideration of whether the trainer should say anything at all. He is apt to be extremely popular with the team, and the men usually like to feel that he is "with them" when they are out upon the field. But in the course of dressing for action the good trainer generally finds time for a little "jolly" to each man while bandages, etc., are being arranged. I know that there have been occasions upon which impassioned speeches have been made, and know too, that they have had some effect, but with rare exceptions I believe they are worthless when they are not actually harmful.

Between the halves the situation is not greatly changed, I think. There have been occasions, even in recent years, when the team has been aroused to a fine frenzy in the intermission. Everybody knows, I think, the story of how Mike Murphy appealed to a Pennsylvania eleven between the halves to such purpose that it won the game after having been eleven points behind. That address would have done credit to the greatest ranter who ever stepped upon

the stage, and there is no doubt of its effectiveness. There is also the incident of the "old grad" who, with his two little boys on his shoulders, shoved his way into the dressing room between the halves, weeping, and exhorted the team to win for the sake of his two small sons who were to go to that same college and become football players when they grew up. These, however, are extremes, and when there is anything at all to be said between the halves, it is generally concerning the technique of the play, both as a team and as individuals. And I am convinced that there should be very little even of this. The good trainer will have little enough to do between the halves.

It remains for him, in the event of defeat, to sympathize with the team after the game, for most of the coaches will not, and encourage them for another season. In the event of victory there will be plenty of handshakers at the dressing-room door.

To sum up, then, the good trainer, albeit a professional, is far from the sinister person he has been held to be by the outsider. I have known instances in which his influence has been for the greatest good even outside of football. It should be, and generally is, an honorable profession, when the individual in question is not a "fly-by-night" of the type so prevalent many years ago, when the bulk of his work was with prize fighters and other professionals. As long as the universities indulge in a professional trainer, he should have every opportunity to feel that he is a valuable and respected cog in the athletic machinery.

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CHAPTER VIII

ADVANCED FOOTBALL—INDIVIDUAL ATTACK AND DEFENSE

WITH the simple theories of attack and defense well understood, and the pristine awkwardness of the new material overcome, the coaches are ready to get in their best work teaching the fine points of individual offense and defense. The burden of this sort of instruction is happily removed from the shoulders of the head coach of a great university eleven, albeit he at all times keeps an eye on the coaches under him, making suggestions and giving advice out of the fulness of his experience, while in the case of a small college or a school the individual as well as the broader team instruction falls to the lot of one man. It is in this matter of individual technique, indeed, that the larger and older institutions are so thoroughly equipped and have so great an advantage over their lesser and younger rivals.

It is right in the scrimmage line that individual technique bears perhaps the greatest fruit, and there are hundreds of able tutors of the backfield in the country, East and West, to one capable line coach. I believe I am safe in saying that in the whole United States there are fewer than a dozen really fine line coaches.

Granted that at any institution at any time there has been an unusually capable line coach, it too often happens that the technique taught by him is lost in a few years through the promotion to positions as line coaches of forwards who have been the stars of a season or two, rather than of men who have had to learn in the sweat of their brows all they know about line play and so the better

equipped for service as instructors. Genius is a poor schoolmaster, in football as in many other things. It is natural, therefore, that the older institutions should know more about the technique of line play, since, in the slang of the field, if they "have lost the dope," they may turn to several old-timers for its recovery. And the greatest of them have to revive this line technique from time to time.

One of the greatest guards who ever stood upon a gridiron was called back one year to coach. While he was illustrating to one of his pupils the proper position to take on defense he was approached by the master line coach of them all. "What are you going to do, Jim," the latter asked, "if your man comes past on your right side?" "Oh," replied the active tutor, "I just stick out my right arm, like this." "Ah yes," retorted the Old Master, "but did you ever stop to think that that is the only right arm in the world?" The star was passing on one of his own pet devices, which no one not endowed with the same physical equipment could hope to master, and not the technique which he himself had learned and which is in the main fitted to all sorts and conditions of line material. It is in this transition process that the old, fundamental, sound technique is frequently lost.

It is impossible to coach a line on paper, and it will not be attempted here, but certain established rules of individual play, ripe with age, for both line and backs, may be set forth. It is safe to advise the line man on defense, "Use your hands all the time," and on both attack and defense, "Carry your man upstream." It is safe, too, to advise the back on attack, "Keep your feet, never run back, and when certain to be tackled be sure you go straight into your tackler." On these are founded all the law and the prophets. It may require an entire season to drive these principles home to the players, but if the men are ever to learn football they must master these simple fundamentals.



by Paul Thompson.

"BROKEN FIELD" RUNNING

The runner has shifted the ball to the safest possible position, and has left free one arm with which to meet tackler. He is in good position to make a long run.

To take up the work of the backs first, which, so far as individual technique is concerned begins with the snapping of the ball and ends with the whistle announcing that the ball is down. There is, first, the preliminary position, which should closely resemble the crouch of the sprinter and which should be exactly the same every time, regardless of the direction or the ultimate objective of the play. The back must remember that he must get instantly into action in any one of five directions straight ahead, right or left, and right or left oblique. His eyes should be on the ball from the instant he takes his position until the ball is snapped or until he gets the starting signal, if one is used. Not so much as the flicker of an eyelash or the tautening of a muscle must be allowed to give away the direction of the play, and above all the back must guard against giving away by any sudden tenseness the approach of the instant when the ball is to be snapped.

If he is to go into the line at any point from tackle to tackle, carrying the leather, he need not worry about the ball, for it will be tucked into the pit of his stomach by the quarter-back, who is there for that purpose, and all he need do is get up speed and fold both hands over the ball when he gets it. If he is going through guard position or through center it is a safe plan to keep both hands on the ball until he is free of the line of scrimmage, but if he is making a wide tackle or end run he should shift the ball to that side of the body that is away from the line, and get ready to use the "straight arm" on the first tackler that drives at him. It is no uncommon experience even at a big game to find the back carrying the ball on the wrong side. This is inexcusable. It is impossible to overestimate the value of a vise-like grip on the yellow egg, and this grip is not only easy but comfortable once it is learned. The important grips, when the ball is carried at one side are the two ends. One end should be cared for by the palm of the hand and the

fingers, the other end by the arm-pit or the arm just above the elbow and the soft part of the side of the body. The arm will protect one side of the ball, the soft part of the body below the ribs, the other. And the ball should be kept low, for once it is brought up against the hard part of the body it is often easy to knock it out of the runner's hands.

When receiving the direct pass from the center the runner will either take the ball before starting, or in mid-career, the latter apt to be dangerous. When using these direct passes the runner must be sure above all things of getting the ball, for the natural tendency is to take chances or to overrun the spot at which the leather is to be taken on the fly.

Granting that the start is clean and the ball well in hand, the runner must bear in mind the necessity of keeping low—in the case of a dash outside of tackle or end, sticking to his interference as long as possible and cutting loose when it is of no more service. Incidentally, should an interferer prove reluctant to leave his feet to smother an approaching tackler, the runner should drive his man into the enemy, shoving him sharply with his free hand. In the course of a wide dash the runner may well lengthen his stride and pick up his feet sharply so that he is "all knees in front and all heels behind." If at the same time he uses the straight arm and keeps his body low he will be about as pleasant to tackle as a forty horse-power hatrack.

Once fairly free and into a broken secondary defense the back may find it advantageous to change his direction and to change his pace. This last is as effective as it is rare, and is done by alternately shortening and lengthening the stride, the back taking care, however, that he is always at top speed when he passes or meets a tackler. The quick change of direction, notably in turning into openings, is largely born in a man, but the beginner should remember that the best plan is to make the turn as nearly at right angles with his original course as possible.

Both the change of pace and the turn are effective against a defensive player who is under good headway, but hardly as satisfactory against a tackler who has reached a point of vantage from which he can turn right or left sharply without any danger of overrunning the man with the ball. Once past the line of scrimmage the runner is master of his own movements and the best judge of ultimate direction, so that he may then turn in or out as prospects seem to warrant, shifting the ball from one arm to the other according to his needs.

The natural fearlessness of a good back ought to increase when he finds himself clear of the press and dealing with individuals of the defense in the open. The advantage is all his. If the tackler is coming up at full speed he is easy to avoid, and if he is preparing for his lunge after a sudden slow-down, he cannot go into the runner as hard, unless he is very big and powerful, as the runner can go into him. Now the big, heavy back, who is not particularly evasive in a broken field, and therefore practically compelled to meet his tackler, can often make the best use of his natural gifts by keeping his power and drive well under him, as Wendell, of Harvard, used to do, by taking short steps, and making certain of meeting the defensive player face to face, driving his shoulders into the tackler as they come together. In this way he will break many a hold, and the short steps will enable him to keep his feet handily while shaking free. Such a man will often stand up for five yards or more after two men strike him.

I have in mind at the moment the methods of three great backs, the Harvard captain of 1912, Coy, of Yale, and Tibbot, of Princeton. Tibbot I have always considered one of the greatest end and tackle runners the game has ever seen. This Tiger star had a neat trick of practically "spilling" off the back of his own tackle and veering sharply out and into the open, where his change of pace, speed, use

of the straight arm, and faculty of drawing away the hips while his feet continued in their original course, made him an extremely difficult man to reach. Wendell was a master of the art of "bulling" through a tackler with his powerful shoulders, his short, almost mincing, steps hoarding up the final drive for the exact instant when the demand came for the ultimate ounce of power. Coy, on the other hand, had a high knee action, and although going into his man, ran higher, by far, than Wendell, and was "all corners" when he struck. The methods must be adapted to the natural gifts of the back, and so far as is possible, the back should be encouraged in the development of his own natural system, to be capped with such fine points as may be gained from experienced coaching. The one thing to avoid is an attempt to make all the backs follow a single system, to which one or more will be unsuited by nature.

When going into the line the back should have his feet well enough under him so that, should his opening be a clean one, he can shoot through to the secondary defense without stumbling forward and perhaps falling through sheer excess momentum, and when he finds unexpected opposition, such as a sudden choking up of the opening, it is all the more necessary that his steps be short and his legs moving like piston rods. In every compact mass that has for its core the man with the ball there will be a perceptible weakening one way or another, and for this the runner should feel, until such time as it becomes second nature to him. The instant he "senses" a giving way he should summon all his power in that direction, for if he is so thoroughly packed in that he cannot easily be tackled there remains a fair chance for him to break clear of the press, or at least to keep his feet for many an extra yard, working always in the direction of least resistance. This feeling of lessening resistance in one direction or another is difficult indeed to define. In some men it is practically

instinctive, while others are obliged to acquire it through constant practice until it becomes a football habit.

Now in shooting through an opening only constant practice will enable a man to tell the exact instant when it is wise to cut in, and even after this is acquired, he will have to learn to take in in the single flash of an eye not only the opening itself, but the situation of the defensive players behind this opening so that before he is through he has mentally mapped his future movements. The good back is always thinking a shade in advance of the thing he is doing, if such flashes can really be called thinking.

Once free of the last man in the defense the back must guard against the natural tendency to overstride, for this would be fatal to the success of his run. Above all, as he values his reputation, he should avoid the error of Lot's wife, for looking back slows him up, and too often is the beginning of a mental panic that continues until he is ignominiously tackled.

Under modern conditions interference is one of the great features of the play of a back, for as the game is played to-day he is often called upon to care single-handed for one of the strongest players on the defense, even in the first line of the enemy. In one of the important games of 1912 a certain great tackle lost his reputation not through the efforts of his immediate opponent, to whom was accorded all the credit in the public prints, but because one of the offensive backs constantly put him out of the play. One of the touchdowns made by Harvard in that season against Yale was directly due to the wonderful individual interference of Hardwick who accounted for two men in the Yale defense at the critical moment.

There is no moment from the time the run starts until the ball is declared down that the back should not employ in interfering, even if many yards away from the play. He should put one or more members of the defense to the sod

every time, as if the success of the run depended upon him and upon him alone. He should prevent tackling from in front, behind, and on both sides. There have been instances in which a defensive player has been able to make two tries at the runner, but against a team that understands individual interference as it is understood in some quarters to-day, such a thing should be beyond the bounds of possibility.

The up-to-date back, when interfering, makes absolutely certain of his man, even at the cost of leaving his feet and going out of the play with him. If he can put him out, keep his feet, and continue the run, so much the better, but the defensive player must be put out of it beyond the suspicion of a doubt. There are many methods of putting a would-be tackler out of the play, but that one is generally best that employs as much of the body at one time as possible. Some men acquire a great deal of skill in blocking with the shoulder and keeping the feet at the same time, but this, as pointed out above, is apt to be dangerous, whereas, if the tackler is met by the entire body of the interferer he will find it difficult in the extreme to keep on his own feet. When the interferer does rely upon his shoulder blocking alone he should as a rule be facing in the direction taken by the runner, as otherwise the tackler may be able to work his way around him. With the body thrown into the tackler on the horizontal, however, with one leg well up, or with both feet in air and the legs extended full length, there is little chance for the defensive player.

The side of the body and the hip should be the immediate points of contact, but there are times when a clever tackler will evade them and the legs alone will have to be relied upon to bring him down. Further, when the interferer meets more than one tackler in a bunch he can sometimes spill two men by meeting one with the hip or body, and turning over the other with his extended legs. It will



oto. by Paul Thompson.

THE BACK WHO KEEPS HIS FEET

The man with the ball (X), about to clear the line, is preparing to meet opposition in the secondary defense, which his right arm is raised ready for the "straight arm." While still in contact with the line he is taking art steps as will be perceived from the position of his left knee.

be hard work disciplining the hands and elbows, which, of course, are barred from use on the offense by rule, but the more the interfeerer practises the use of the body and legs the less he will come to depend instinctively on the illegal use of the arms and hands.

Despite the growing tendency to make a deal of use of the direct pass from the center nowadays, one of the all-important functions of the quarterback is still the handling of the ball. If he takes the leather low from the center the chances of fumbling will be greatly decreased, and the smooth passage of the ball from the center to the quarter and thence to the back, will be facilitated. With the leather coming back high there is at least an even chance that it will be handled high in the backfield, thus leading to spasms of fumbling. In passing for a buck into the line the quarter should place the ball in the pit of the runner's stomach; in the case of an end run he may let it go out of his hands before it reaches the back, but I believe that the days of the old "floating" pass, so popular years ago, will never recur. It is the safest policy, as constant experiment has demonstrated, to pass the ball to the runner, and not to some spot where he is expected to be, as is the case in the direct pass from center. With fast passing, very little allowance will have to be made for the pace of the runner, and the latter will never find the ball floating ahead of him just out of reach, nor will an opponent breaking through be able to snatch it on the fly, as has sometimes, if infrequently, happened in the past.

The position assumed behind the center is largely open to debate, and varies with the natural ability of the candidates. Some men face the center, legs wide apart so that the other backs can see the ball at all times, while others turn their right side to the snapper back. The full facing position is especially good if the quarter is ambidextrous in his passing, but has the disadvantage of requiring quick

moving in the event of a fake kick. Time was when the quarter took up his position well back and to the left on kick formation, whether the play was to be an actual kick or a fake followed by a run. Nowadays, he gets out to that post with the snapping of the ball.

The quarter who stands sidewise to the center should be careful to hold his hands always in the same position, whether the kick be bona fide or a fake. There is a tendency to spread the hands a trifle when the kick is to be genuine, and bring them closer together when there is to be a run from the kick formation. This is a dangerous tendency and should be discouraged as early as possible, just as the center should be careful, when a kick is to be made, not to lift the ball from the ground in one motion and shoot it back with a second, distinct motion, when making the long pass to the kicker. These are often little things in practice, but not infrequently vital in the big game. The quarter should always make certain to get into the interference, for this is one of his primary duties, and even in the case of a sharp dash through the center he can lend his aid in bending back the line. It is not important that the quarter have weight, but he must have speed, and a good head on his shoulders if nothing else. Speed and brains will win a place in this position on the most important of teams when the candidate who may hold the university strength record is hopelessly floundering. The quarter must have all the qualities of a good halfback, for on the direct pass he will often run with the ball, and he may also be used on the receiving end of the forward pass. He should be also a good forward passer, and if possible an accurate drop and placement kicker, although place kicking and punting may sometimes be turned over to line men if kickers are scarce in the backfield.

The ideal backfield contains four punters, drop and placement kickers, and forward passers, but such a backfield is

as rare as the white rhinoceros. But if both fullback and quarter can punt, forward pass and drop-kick, the head coach should be happy indeed, for around these two can be built any number of promising plays. The final quality of the quarter, in which he should surpass every one of his team mates, big and little, is immunity to injury, for he is the brains of the team, and should be in action from whistle to whistle.

On the defense the backs are worked quite as hard as on the attack, for there are all sorts of plays to guard against. The men must not be drawn out of position by fakes and threats of fakes, and they must above all things tackle savagely and accurately, and catch kicks cleanly. I mean *catching* kicks, too, not allowing them to strike the ground in the hope of picking them up on the bound. The safest method of catching kicks, of course, is to take them in a pocket formed by the arms, one leg and stomach—in no event should the ball be taken against the chest—but there are times when the ball has to be taken on the run in any manner possible, and the backs would do well to practise catching the leather in their hands in the style of the Carlisle Indians, who have from time to time learned to catch the ball like a baseball. The advantage gained in taking the ball on the run is very great, for the runner will already be in his stride and is very apt to be overrun by the ends coming down the field; it is then only necessary to follow the clearest path up the field—up the side line if one of the ends has been by any clever blocking or streak of luck turned in instead of out. It is when well done in his own territory and against the wind that the catcher of kicks is put to the severest test, for he cannot tell whether he will have to face long kicking or short, and in the case of a ball falling close to his goal line he will have to use his own judgment as to whether to make the catch or allow the leather to go over the line for a touchdown.

Were the ball round instead of being what the rule book terms a "prolate spheroid," there would be little difficulty in making a choice, for in the former case it would be certain to go over the goal line from a reasonable distance. But the yellow egg is often apt to bound straight up in the air or even back toward the kicker, and even if captured in front of the line, the back is in serious danger of being thrown across the last chalk mark for a safety, a most discouraging happening for the team so scored upon. The safety is one of the game's demoralizers, and the defensive back thrown across his own line might as well be taken out of the game, as a general rule, for his nerve will not be as good as it was before the score was made.

Backs who are lying in wait for kicks must coach each other just as do outfielders in baseball, and the back who is making the catch and has yelled "I have it" must be protected and covered by his associate. Above all things he must not take his eye off the ball in order to look up the field, for he will need to concentrate his attention on the leather until he has it safely gripped. After that he should take one glance at the field in the course of the first lunge straight ahead or diagonally—never laterally, or back. It might easily be possible to dodge one or both of the ends by running back, but in so doing all work of the players up the field in blocking will be nullified, and the opposing eleven will have time in which to form and come down on the catcher rapidly. Needless to say, perhaps, the first duty of the non-catching back is to put out one or both of the ends, going to the earth with them if necessary.

As the man with the ball glances up the field he must decide instantly on which side of the gridiron the greatest execution has been done by the defense. If one of his own backs or ends has put out one of the opposing ends, or even turned him in, the runner should make for that side, and after a short dash turn straight up the field. The back who

is putting out the end should down him so as to fall across him if possible and so pin him to the earth, that the runner may have all the time possible to get up the field at top speed before he strikes the main body of the opposing team. If the run has been well to the side it is barely possible that the opponents have been pulled over in that direction, leaving a "broken field" on the other side of the gridiron. In this case the man who can make a sharp turn and cross the field at a diagonal to the five-yard lines will be able to add many yards to the length of his run.

In facing kicking with the wind of the extremely clever order that is frequently in evidence nowadays, the back should remember that while the spiral, or twisting ball, that rides the wind for a long time, will give him valuable seconds in which to maneuver, he must make his judgment of the ball's final destination on the basis of the early part of its flight, for once well on the downward course the ball will come very fast, and usually far short of the spot where the uninitiated would naturally expect it to land. Once in the zone formed by the field and the lower tiers of the big stands the air will usually be still, save when the wind is very strong, and close to the ground there is apt to be a back-draft comparable with the undertow at the seashore. These things will have to be taken into account when facing the kicking game, and a study of the field of play and its air currents, or what Walter Camp has called "wind echoes" should be undertaken by all the backs before the big games.

There are peculiarities of wind and sun in the Harvard Stadium not to be found at Yale Field, and vice versa, and conditions at Franklin Field are different from those at West Point. On the "Plains" the wind is steadier, and continues its influence close to the ground, making low, fast kicking very difficult to handle. Again, since there is far more sky background at the Point than at most other

fields, the lofty kicking is also difficult to judge. Many a sure catcher has come to grief against the Army for these reasons. There is far less of the "wind echo" effect at Yale Field than in the Harvard Stadium. With the "bowl," or closed end of the stadium behind him, the catcher of kicks is apt to be in difficulties most of the time. When the wind strikes into the open end of the stadium diagonally it swings off the farther wall in an arc that is apt to terminate in a back current short of the goal line, and in this situation the ball not only descends very fast, but also very erratically. The man who is preparing to meet the kicking game there can verify these statements easily enough by experimenting with bits of paper. A little experimenting with straws even in the course of the game itself will do no harm.

With kicking at its scientific height to-day almost any backfield is apt to strike moments of demoralization. Under such conditions it is a good plan to signal for a fair catch a few times in order to steady down and get a better understanding of the range. The signalling may be abandoned as soon as the backs are once more in form.

Under the rule that permits quick kicking under the scrimmage line, or very close to it, an attacking team that sweeps across the center of the field will very often open a quick, low, kicking assault, and this, too, is difficult to face. In general, however, it is safe to say that these kicks are more apt to bound forward than back, and the defense should take plenty of room, in order not to meet the ball on the half-bound. Princeton once won a game against the Carlisle Indians at the Polo Grounds with this low-kicking attack. The ball was wet and hard to handle, and the kicks were driven right at the feet of the Indian backs. They failed to take the necessary room and were soon in a state bordering on demoralization. Other instances might be cited. That the ball will bound forward a great deal

of the time on these low kicks has been amply demonstrated by teams that have attempted to work the old onside kick successfully. Two or three years ago Pennsylvania literally bombarded a Michigan eleven with these low, onside kicks, but the ball would not bound up so that the end, who was right on the spot, could recover, and the Western backs, taking plenty of room, picked up the leather cleanly and blocked the well-conceived Quaker plan of action.

When the defensive team is playing its ends on the line against the kicking game the two backs who are in the first line of backfield defense should concern themselves with the ends coming down the field under the punting. These they should endeavor to pin to the ground or turn in, so that there will be a clear path up the side of the field. If the ends are played back of the line, they will have the first crack at the opposing ends. They should turn and come back down the field with them, also turning them in if possible, while the backs look after other forwards, fast tackles or guards, who are also in the hunt.

It is important to get these other line men out of the way, for they will often nail the catcher of a kick even if the end has been able to do no more than stagger him for an instant by an incomplete tackle. Much of the arrangement of the defense depends upon the distance the kicker stands behind his own line of forwards. Should he be reasonably close every effort should be made to block him; while if, as was the case with Coy and others of his type, he often kicks from eleven or twelve yards behind the scrimmage line, the attention should be turned toward keeping his men from getting down the field, blocking as many men as possible right on the first line of defense. This feature belongs properly to a consideration of generalship, but is mentioned here to show that the individuals in the defense will have to adapt their personal efforts to the needs of the immediate situation.

While on the subject of catching kicks the catching of forward passes, both offensively and defensively, may well be considered. This sort of catching has to be done with the hands alone, and the advantage is of course with the defense, for the player in that case is facing the pass, and while holding on to the ball once it is touched is the desideratum, the mere beating of it down will spoil the play as a ground gainer. If the back cannot get both hands on the ball, he should at least knock it down with one. On the offense both backs and ends should be expert handlers of the forward pass, and nothing but practice, constant and intelligent, will make them so. Some teams shoot the pass direct to the receiver, others to where the receiver should be at a certain instant. The former practice has the advantage that the receiver will be able to turn considerably to receive the ball, while the man who has to be at a designated spot, reaching there after the ball has left the passer's hand, must take the leather any way he can get it and in mid-career. The eligible receivers should get out to their stations without stopping to look back until they are about ready to take the ball. Often it is a good plan not to turn at all but to wait for the yell "Hike" given by the passer the moment he lets go of the ball. A too obvious turning gives away the play. These little hints belong properly to another chapter, and are given here to show how necessary it is for the ends and backs to learn to receive the pass in almost any position, using the hands only.

Tackling, in the backfield, is one of the most important features of a team's work, for under the rules of recent years the secondary defense has had more than its share of the tackling to do. In any impact between two men of equal weight the one moving at the greater speed will suffer the least from shock. This is a good rule for the tackler to remember when he is not working in the open field, for a too close adherence to it in the latter situation makes for many a

missed tackle. With the runner close at hand, however, say just clearing the line, the back should go in fast to meet him, and hit him with the shoulders just above the runner's knees. At the same time the arms should close around the runner's legs, the wrist of one hand seized by the thumb and fingers of the other. The hands are used only as a last resort, and when it is impossible to make a perfect tackle. In such cases the tackler brings the runner down any way he can. If he can get even one hand on the back there is a chance that there will be just enough of a delay to let another tackler make the job complete. In this head-on tackle it is well not to leave the feet, for the shock will be harder on the runner, who is without support, than upon the tackler, who still has the support of one braced foot. Just as the tackler makes his strike he should shoot forward horizontally, very close to the ground, getting all the "drive" possible out of his legs, in order that he may break through the runner's straight arm. It is well to go under the arm, if possible, but if this cannot be done, the tackler should strike so hard as to beat the arm down and pinion it in the tackle.

In meeting the runner on either side the body should be thrown across in front of the legs and the latter pinned against the tackler's chest. If the tackler has made a hard enough drive this will turn his man over and bring his own body on top, at the same time throwing the runner back toward his own goal. The tackler's lunge will have to be longer than in the case of the head-on tackle, to be certain of bringing the body well across the runner's legs. If the tackler be big and powerful and the runner by any chance carries the ball on the wrong side—i.e., on the same side on which the tackle is to be made—it is a good plan for the tackler to strike the runner just where he is carrying the ball, in the hope of causing a fumble. Such a tackle is apt to spin the runner and shake him up a great deal, and,

carrying the ball on the wrong side, that arm will be working naturally more than it ought to, and the grip on the leather be insecure.

When two backs strike a runner at the same time they should be certain, by means of previous agreement and practice, to thoroughly cover the runner with their double tackle, throwing him as far back as possible. The defensive back must remember that he has the use of his hands all the time, and be sure to use them on any interferer who happens to confront him. It is necessary sometimes to lunge in and carry this interferer off his feet and into the runner if possible, but as a rule the tackler should stand him off with his hands and arms, just as if he were the runner and the interferer a tackler. In case the play has been partly stopped at the line and the runner is surrounded by forwards who because of the press have been unable to bring him down and are slowly giving ground, the secondary defense man should come up fast and tear into the group with his hands and arms to reach the runner. At other times it would be well for him—this especially the duty of the fullback—to drive in low and gather in a double armfull of legs, friend and foe alike. This will topple the mass over and often uncover the runner so that another defensive back can get at him.

Open-field tackling is one of the most difficult features of football. The runner will be at top speed with all the advantage of many yards of field in which to maneuver. He will be able to use change of pace and direction and will have the stiff arm at his service. In such a situation the tackler who comes up too fast will find the runner flitting past him like a ghost, or will easily be tipped over by the straight arm. Some little ground will have to be sacrificed in such circumstances. The tackler may come up fast until he gets within five yards or a little less, of the runner. Right here he should slow down and prepare to lunge directly



Photo. by Paul Thomson.

A "LONG GAINER" IN MID-CAREER

Sparks, a Princeton halfback, is seen turning Yale's right wing in one of those pretty, open plays, so valuable at times, when used near the middle of the field. The "long gainer" picks up anything from five yards up or practically nothing. This time it is "making good." (X) indicates the runner.

ahead, or to right or left. This instant's pause will prevent the overrunning of the man with the ball, the commonest fault of ambitious but green players. The action immediately following the pause, however, should be of the hardest description, the final lunge making up in drive what is lacking in actual speed.

The quarterback, the ultimate defensive player, should be the surest tackler on the team, for he is the man on whom the eleven relies to prevent touchdowns once the runner is clear. The quarter should come up, if possible, a little to one side of the runner, so that the natural course of the man with the ball will be toward the sideline. The tackler in this case can afford to slow up considerably in order to make certain of spoiling any sudden dodge, or of driving the runner across the side line. Five or even ten yards sacrificed to the certainty of the tackle will not hurt the defensive team, since a touchdown has been saved.

In all side- and open-field tackling it is as well to come as near leaving the feet as the rules permit, because there is greater space to cover. One dragging foot slows up the tackler very little, and still keeps him within the boundaries set by the laws of football. All these little but very important matters of individual technique are to be mastered only by practice. The tackling dummy is useful only if it is properly handled. In this sort of work a great deal of time should be spent in teaching the men how to keep from falling over their own feet, a natural tendency of green players. The coach who is handling the bag and directing the practice should have an assistant whose duty it should be to correct the tackle after the bag has been yanked down. No player should be allowed to get up off the ground after a bad tackle until he has been obliged to rearrange himself in the position he would have assumed had the tackle been a clean one. This applies to tackling

actual players as well as the dummy. Down-field tackling will be treated in the following chapter.

The technique of line play, so far as the individual is concerned, is as difficult to teach as it is to learn, but tells tremendously once it is really mastered. Its absence spells almost sure disaster. The masters of this department of football always have in mind an ideal, and too often material that never can be whipped into ideal shape must be used. They simply do the best they can, varying their own theories in individual instances and getting their results now by one method, now by another. The forwards are in for a steady grind from the beginning of the season to its close. They have so little conspicuous work to do that the real worth of their services is not appreciated by more than twenty per cent. of the crowd on the day of a big game. This will continue to be the case until the public learns enough about it to criticize intelligently, or until the ranks of the spectators receive a few hundred thousand more recruits from the football field. I know a man who is a splendid all-round coach who is nevertheless much hurt when he is called a "great line coach." As a matter of fact his eminence in line coaching is something of which to be inordinately proud. Indeed, one of the reasons why he is so good an offensive coach for the backs is his ability to read the weaknesses in the opposing line by means of his mastery of line technique.

There are, generally speaking, two systems of line play on defense, one used all over the field, the other usually confined to the space between the two twenty-yard lines. The first is the low-charging system, the second the stand-up style. Their use depends largely upon the natural material available. If the line is big, rangy, and heavy, the stand-up style may be used to deadly advantage. If the material is only of medium weight, the coach would do well to stick

system is well adapted to the ripping, grinding, tearing, breaking through style of line play so much in evidence at West Point, the second makes it possible to turn the attack back upon itself, to spoil it, bottle it up and tangle it with its own forwards. The stand-up style is valuable when the player can carry his man upstream, although in the other system the same thing is accomplished to a considerable extent. The stand-up style permits of one maneuver that the low-charging style does not—"stalling"; stiff-arming one's opponent and swinging round to right or left. The two styles, as I have said, may be advantageously combined, but it takes a football artist to do it.

One variation of the stand-up system, used by one of the most successful teams in the East, is that of blocking up the line with the bodies of both offensive and defensive players, thus making a solid wall, impenetrable to the attack. The objection to this method is, however, that it allows the play to get under way and the interference for end and tackle runs is not so quickly broken up. In the system alluded to the defensive player chucks his opponent under the chin, straightening him up in the charge, and lifts one of his legs, thus getting him to one side, bound, practically in a helpless position, and choking the line with his body.

In all sound styles, however, the charge of the defensive line goes with the count of "one-two-three"—three distinct motions into the attacking line, ending in the final upstream heave that simply smothers the play.

If the coach has been so fortunate as to have an unusually fine squad he will find his line as finally chosen freighted about as follows: Ends, 165-185 lbs.; Tackles, 185-200 lbs.; Guards, 190-215 lbs.; Center, 175-200 lbs. The top weights given do not necessarily imply lack of speed. Indeed, there have been stars at the following extremes: Ends, 132 and 190 lbs.; Tackles, 165 and 235 lbs.; Guards, 168 and 230

lbs., and Centers, 160 and 250 lbs.—these on high-class teams, too. But the weights first mentioned are close enough to the ideal. With such a line a coach has a set of forwards that should be able to play any style of defense—to stand up and look over the opposing line when necessary, and to charge low and hard when the situation calls for that system.

Above all things, the forward must use his hands all the time. Some men swing their arms nervously, and then bring them through when the ball is snapped, while others hold one or both arms rigid, behind them, until in actual action. There is nothing radically wrong with either method so long as the forward gets his hands and arms into the play the instant it starts. He has his opponent at a great disadvantage since the latter, under the rules, when attacking, cannot use his hands or arms, and must block with his body, shoulder, or legs. Furthermore, the defensive forward, by swinging through with his hands, can stagger his opponent before the latter can get in the full strength of his charge across the neutral zone, this zone, by the way, being one of the greatest of aids to the defense.

Should the offensive forward be playing extremely low, the defensive player would do well to pull him over on his face and go on through him into the play, whereas should the opponent be playing on the customary plane, or a little too high, every effort should be made to lift him, to straighten him up and carry him back into the play. Since most teams use line men in the interference, this carrying back of the protecting forward will tend to smash such interference and disrupt the play, at the same time allowing the defensive forward a chance to tackle the runner with his own legs nicely braced, so that the weight can be used to bend back the upper part of the runner's body and put him down toward his own goal. High tackling in the line, when the men are strong enough to bend the runner over

backward, is hardly a serious fault. On the other hand, should the runner be one of those short, stocky backs who run like rabbits, very close to the ground, the defensive forward would do better to smother him as quickly as possible, pinning him to earth. A great deal rests with the individual brain work of the defensive forward, who should do his utmost to "fox" his opponent into an awkward position, wherein his balance will be insecure. There should be every attempt to deceive the enemy as to which side the crash will come, and as to whether he is to be pulled over or carried back.

The work of the center on defense has been treated at some length in a previous chapter. As a general rule the position of all the forwards save the center should be with the outside foot—the foot farthest from the center—on the line, the other foot braced behind, both toes toward the line, and the whole body, with the back straight, at right angles to the line of scrimmage. The inside, or both hands, should be on the ground, save when the forward is playing the high, or stand-up defense. After a brief glance at the formation assumed by the opponents, the eyes of the forward should be on the ball, and he should start his charge the exact instant the ball is snapped. He can keep watch of his opponent out of the tail of his eye, and he should never let the ball disappear from view until the conclusion of the play.

Defensive guards play a shade outside their opponents and drive them across the play should the latter be aimed directly at center, while if the play goes outside of the guard position, it is a wise plan to charge through outside the attacking guard and into the runner or his interference. Should the play go wide of his position the defensive guard should charge through and follow it in the hope of making a tackle from behind. When the stand-up defense is used the guard should stiff-arm his man and swing around behind his own line to support the threatened spot. These

directions hold good in the case of a balanced formation of the line. The defensive shift to meet the attacking shift is treated at length in a subsequent chapter. Above all things the guard must follow the ball so closely as to make sure that no crisscross or delayed pass will coax him out of place so as to compel him to leave an opening in his own position.

With the guard just outside his opponent the tackle may take considerably more room, taking care to be outside the outside man on the attacking line; he should not be coaxed out too far to protect the space between himself and his guard save when he can carry two of his opponents with him. The tackle may handle himself with more latitude than the guard, facing slightly in the direction of the opposing backs should he deem it necessary. It is a good plan for him to do a little restless shifting in his position in order to coax his opponents into giving away the direction of the play. He should keep his eyes on the ball and charge the instant that it is snapped. If his end is playing the waiting game he should drive through at once and ram into the interference, carefully keeping his feet the while, whereas, should his end be coached in the smashing style, he should drive into the opposing end with arms outstretched, straightening the latter up, and keeping his body well away. He will need to keep his head up and watch for the direction of the play, as well as note the work done by his own end in breaking it up. For the moment he is playing both end and tackle, and his weight gives him the chance to "stall."

If the play goes outside his position he should work free of the end on the outside and tackle the runner, while if the play is aimed directly at him or inside his position, he will do well to drive the opposing end into it, or charge through inside the end and smash into the play. If the play is headed for the other side of the line he should go through and follow around in the hope of tackling from behind.

The defensive end should play all the way from one to five yards from his tackle, according to the system used, assuming the position for the sprinter's start. Needless, perhaps, to say, he should start with the snap of the ball, and if playing the smashing style, should get right into the interference and at the man with the ball as fast and as hard as possible, keeping his feet; and if unable to reach the runner causing as much wreckage as he can. His course should be just enough off the straight line to enable him to turn the interference and runner in, but this should not be accomplished at the cost of getting on the spot promptly. If playing the waiting game, he should run forward straight back of the line about a yard, and then go in on the outside, keeping the interference at arm's length, nailing the runner if possible, and if not, turning the mass toward his own tackle. In both cases, should the play be headed for the opposite side, the end should follow around on the jump, alert to make the tackle or pick up a fumbled ball.

If the defensive end is played back on punts he must take care of the offensive end going down the field, whereas if he is playing on the smashing system it is his duty to go in and hurry the kick and block the kick if possible. The greatest danger in following around is that the end will overrun a play that depends for its success on the double or delayed pass. Of one thing the end must always be certain, and that is never to let the interferers reach his body with their shoulders, in which case he will be put out of the play, and the interference will continue in its course very little shaken up. A good defensive end is never slow to leave his feet when he finds it absolutely necessary in order to wreck the interference, and the man who is playing the smashing style is in better shape to do so, I believe, than he who is coached in the waiting system. It is the end's duty to hurry forward passes as much as possible, and here again the advantage lies with the smashing end in that he

can go in in perfect safety, confident of the support of his tackle and halfback, and spoil one of those indeterminate "forward pass or run" maneuvers that sometimes gain a lot of ground if the attack be compelled to make its decision at an early stage.

On the offensive a capable center makes all his passes with a single, sweeping motion, and when necessary to look at the back to whom the pass is to be made, concentrates his attention on that single feature of his play, trusting to get the charge on his opponent after the ball is cleanly sent away. Some coaches maintain that the center should look at his opponent when making the pass to the quarter-back, and at the back when making the direct pass, but it is a better plan, I think, if he will put his head down and look backward between his legs now and then even when making the pass to the quarter. In this way the fact that a direct pass is to be made will not be advertised for the benefit of the enemy. The center, on the attack, should play on a low plane, with his knees wide apart, the ball in both hands opposite his forward foot, elbows inside his knees, and his back perfectly straight. Indeed all the forwards should remember to keep their backs straight all the time on the offense, for this is one of the keynotes of the successful, sustained charge.

Forwards play closer together on attack than on defense, crowding in as much as is necessary, and often as closely as is permitted under the rules, keeping in mind the maxim that "the territory behind the scrimmage line is sacred to the backs." The word "sacred" is a strong word, but not too strong to suit the backfield men, who dislike having their forwards let opposing line men come streaming through on them before they can get started.

The best position for the offensive forward is with his outside foot and his inside hand on the line of scrimmage, and his eye on the ball, save that some latitude may be

allowed in the latter matter when a starting signal is used. If the play is going directly through his position, the center should charge absolutely straight into his man, while if to one side, he should make certain to charge with his shoulder and his body on the same side as the play, and drive the defensive center away from the direction taken by the runner. When the play goes outside of tackle, on either side, the center charges clean through and takes care of the first man in the secondary defense. In making the long pass to the fullback for a kick, the center should sacrifice every other consideration to that of perfect passing, and on no account is he to pass too high. Better a pass along the ground than over the back's head, for in the former case there is still a chance of getting the kick away, while in the latter the kicker is in for serious trouble.

Every forward must remember that on the offense as it is planned nowadays, he is expected to do as much interfering as the backs—this in addition to the regular blocking and opening of holes. For this reason he should be as quick to start backward as forward, pushing off with his forward foot, and wheeling on the pivot of his back foot. The forwards should note carefully the positions of the secondary defense, for they will frequently be called upon to go through and put these men out of the play after they have bumped their opponent just enough to slow them up and so protect their backs. The line man who goes through in order to interfere, will find that he has the same problem before him as the interfering back, and should use the same methods of blocking, already described.

Guards and tackles generally rest upon one knee until the lineup is complete and the team about ready for the play, when they stiffen into their regular charging positions. This will rest them a great deal when there is a great deal of smashing attack to be done, but they should never let the starting signal or the snap of the ball find them with

one knee on the ground. Should a guard find his opponent playing high, he must be sure to get under and lift him, while if his opponent is too low for that, the aggressive guard should pin him down with his own body, so that the play may pass on over him.

In case the guard is called upon to get into the interference behind his own line instead of beyond the line of scrimmage—a scheme of debatable value nowadays—he will have to step off first with his back foot in order to be sure to disengage himself from the center, and aid himself at the same time by pushing off from the center with his hand, which also aids the center in his own charge. It takes a very fast guard to get into interference behind his own line, for the defensive guard on the opposite side is likely to get through before he can get away and so upset the apple cart. In lining up the center should be quickly in place, otherwise the play cannot be speeded up, and the guards should be with him like a pair of brothers. With this trio promptly in place the rest of the formation is quickly and easily made.

The tackle on attack takes the position already defined for the guard, except that he is about an arm's length from his own guard. Plays that go the opposite side of the line give him splendid opportunities for interfering with the secondary defense, which, with the tackle, has become a more and more important duty year after year. Our tackle will find himself about midway between the defensive guard and tackle, and the latter he must in no case follow out. When the opposite side is attacked by his team he should bump, rather than block the tackle out, and then turn sharply in to take one of the men in the secondary defense. Should the play be beyond the tackle on the opposite side he may either cross the line of scrimmage and veer over toward the play, putting out the nearest man in the secondary, or he may jump back from his station in the line and get into the interference. It is asking a great deal

nowadays to expect a tackle to lead it, but he will find a useful place in it somewhere. Personally, I believe the tackle is of greater use beyond the line of scrimmage.

When the play goes through on his own side between his center and guard, he should help his guard with the defensive guard, the end meanwhile looking after the tackle. On other plays around his own side, too, he should as a rule concern himself with the opposing guard, leaving the big fullback and the end to care for the defensive tackle, unless the latter is playing in too close, in which case he may be driven back.

On the attack much depends on the clever work of the ends, who if they are heavy as well as fast, will be of great value to the offense. Their particular care is the opposing tackle, whom they must sometimes put out alone, sometimes with the aid of a back. The end should play close in beside his tackle and devote his entire attention to the opposing tackle, whom he must smother at all costs if the play comes on his side of the center. If the play goes through between him and his own center, he should be certain to block the tackle out, leaving his feet and throwing his body and legs across him if necessary to make assurance doubly sure. If the play is an end run he should turn the tackle in. It is a mistake to follow out a wide playing tackle for this purpose, for if the defensive tackle is playing too wide it is the business of the quarterback to see that the play is sent inside instead of outside of his position. When the end sets sail under a forward pass he may bump his man just a second if the pass is to be short, and start away cleanly if the heave is to be a long one. The end's downfield work is discussed in another chapter.

The hints on line play given above are merely the simplest principles of the art, and the system has to be made to fit the material. There will be keystones in the line both on attack and defense, around whom the system will have

to be built—unusually good men who will serve as “anchors” on the defense, and as “steam rollers” on the offense. It will be necessary sometimes, for this reason, to change the positions of the men on attack and defense, so as to get the strongest and best balanced combination in action regardless of the nomenclature of the positions. For this reason it is a good plan to familiarize the candidates with the normal conditions of play on both sides of the line, so that shifting may be done from time to time, and the player on one side of the line feel at home on the other. Again, what one man can do in the way of blocking with the shoulders, another can do better with the hips, and vice versa. It takes a real live coach, handling real live material to make a line, but the basic principles remain the same, and the candidate who follows carefully the instructions here given will find that he is at least on the right path.

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CHAPTER IX

ADVANCED TEAM PLAY—TALKING IN ACTION—THE SIGNALS

IN the course of the development of any first-class eleven there comes a time when the finest possible touches in team play must be put on. This ultimate polish is the result of instruction that has been absorbed throughout the season, coupled with the assimilation of ideas that are not given to the eleven perhaps until in the very last days of practice. A naturally intelligent eleven will take its polish at an earlier date than a plodding team, and the coaches constantly face the problem of deciding just how fast to give to the men the real finesse of team play. Some of this is in charge of the individual coaches, some in the sole charge of the head coach, as for instance the final advice as to how to meet and use to advantage certain peculiarities in the play of the biggest opponent of the year. In any intelligent system of coaching the idea of mutual help will have been instilled into the eleven from the beginning of the season, but its very finest stage may not be achieved until well toward the day of the big game.

The eleven must be fairly well advanced, for instance, before it can take up a study of the value of "talking" the game, but no high-class team has ever been silent in action, and to-day the talk that is heard is all for a definite purpose. It is not done with the idea of rattling the opponent, for the first-class eleven is too busy to waste breath in any such process. Practically all the talk heard on the field to-day belongs to the game. It is not intended to annoy the foe, but to make sure that every man on the team is helping

every other man and saving him extra and purposeless steps. Of course it has long been customary for the kicker to call the direction and distance of the ball whenever he sends away a punt, but the downfield calling of the men behind to the men in front belongs to the newer school.

The kicker cries as the ball leaves his instep, "Left," "Right," or "Short," according to the direction of the leather and the distance it seems likely to travel. This avoids the necessity of the ends on their way down the field making more than one turn to judge the flight of the ball, and, indeed, there are ends who with the cry of the kicker in their ears, and the faces of the receiving backs by which to judge, do not need to turn at all, and so are saved valuable time and any distraction of the attention from the men they have to pass and the man they have to tackle. To a lesser extent this crying out of the kicker aids the other forwards, and adds to efficiency in following the ball. There is no reason, indeed, why the punter should not continue to call as long as there is a chance for his men to hear him, for if the ends are fairly sure of the direction of the leather when they meet the defending backs, and they know that it is well to one side, one of the ends can with a fair degree of safety turn inside of his man rather than out, and so reach the catcher in much quicker time.

In most systems of downfield work under the kicking game the ends are supposed to keep *outside* the man whose business it is to delay them, on the theory that should they be shut off from a tackle there is at least no chance for a long run back up the side line, as the defensive back will be compelled to come up the center of the field and into the arms of the other members of the kicking team. But there are times when a cut across would be most effective, and if talking—or rather shouting—the direction from behind can steer the end properly he will have a better opportunity to make a brilliant tackle.

This downfield talking under kicks should be passed on from man to man, for the guards at least, if not the tackles, will have an opportunity to look behind them and be in position to help the ends. Of course when the direction is sharp, the whole line swings considerably, and of course, too, there is a preliminary signal indicating the probable direction and length of the punt. All good things go astray sometimes in the heat of a hard game, however, and the fullback and other members of the team should have some safeguard against being led astray on a kick that has accidentally gone amiss. This is especially true when the kicker is forced to do his punting against the wind, when no amount of care can make certain in advance of the distance and direction of the leather. Again, if the team becomes accustomed to talking in the kicking game it can be taught to do the same when other plays are used.

The forward pass is another downfield play in which talking is of the utmost value. The cry of the passer at the moment he lets go of the ball makes it unnecessary for the eligible receivers to turn to look for the leather until that moment. It is the custom under many systems for the passer to yell "hike" or "ball" or something like that the instant the ball leaves his hand, and if the men are accustomed to it they will have a fair chance of getting the leather even when the ball is passed not to an individual but to a previously indicated spot. It is also very baffling to the defensive backs, for the instant one of the eligibles is seen to turn he is covered, but up to the moment his turn is made any one of these men has plenty of room in which to maneuver and to take the pass.

But it is in the case of the blocked kick well out in the field that the team that uses the "talking" system will be rewarded—sometimes with a touchdown. Let us suppose that a kick has been blocked and a member of the team that did the blocking snatches up the ball with a clear field

before him. He knows that no matter how fast he may be he probably will be unable, encumbered as he is by the ball, to beat a member of the pursuing team to the goal line without a comfortable start and without fair covering from behind. Now the first impulse is to turn to see how many of his own men are close behind him, and which of the enemy is in the van of the pursuit. It is the most natural impulse in the world, for the man with the ball under these conditions feels that he has a chance that may, and in most cases never will, come to him again in his lifetime. He is apt to feel that he will risk a look over his shoulder, even if he has been told again and again under no circumstances to do so. If he does turn around he only gives time to his pursuers and greatly lessens thereby the chance for a successful trip to his opponent's goal line.

He can be saved from this danger by the shouting of his companions, always provided that they have been taught to do that sort of thing without confusion. He should be able to tell without looking around just which of his men are behind and just which are nearest. In the event that he has been better protected in his "getaway" on one side than the other he can also be told whether to veer to the right or left, that the strongest support may be brought up on that side. It matters not how fleet of foot are his own men who are following him as long as he feels that they are within reach of his pursuers. There remains for him then nothing but to summon up all the speed of which he is capable, remember not to attempt Brobdignagian strides, and hold to his course regardless of the enemy, or veer sharply right or left, according to the shouted instructions. Constant practice of this blocking of kicks and calling to the man who snatches up the ball will sometimes reward the coaches and the team with an unexpected victory.

In the line, of course, there is less open talking, but more quiet signaling from man to man, for in opening holes

two men may find it necessary to work in a way different from what had been planned, and some difference in the amount of room taken may mean all the difference in the success or failure of the play. In streaming through to the secondary defense there is also often a chance to help a back who may have come through with his head down, and perhaps stumbling, by indicating which way to swerve, the man who has put out his secondary defensive player shouting "I've got him." As the call comes from right or left so will the runner go. It is perhaps a small matter, and not always helpful, but men who are keen for victory omit no chance.

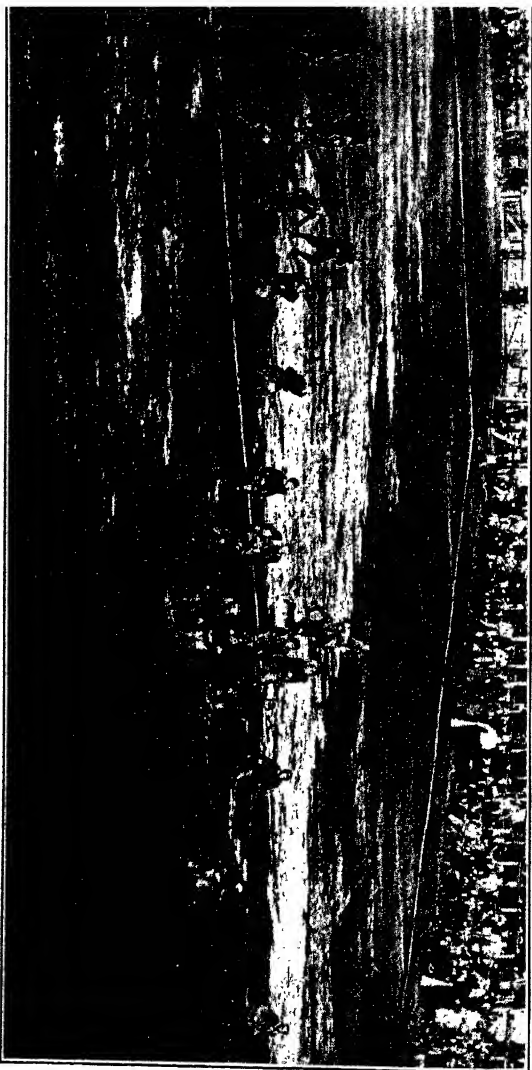
Signals have accomplished a great deal in the way of indicating the predetermined positions of men, but it must be remembered that some of the most successful plays have gone through, though not exactly as planned, and their success has often been due to mutual helpfulness that comes of talking on the field. Unless an opening is clean the back is apt to come through "blinded" and unable to get his bearings on his own hook. He can be turned in the right direction sometimes by the work of helpful men in front of him.

Healthy rivalries lead to a talking team as much as anything else, and keen competition between the ends, the tackles and the guards, even of the team as finally chosen, is always to be encouraged. Mutual criticism has quite as important a place as mutual encouragement. The backs should be taught to be jealous of their rights, to keep the forwards up to their work; and the line, too, should learn to demand the utmost excellence of the backs.

It is a common experience in the course of the preliminary season to find the backs at top notch and the line working poorly, or vice versa. There are days when the secondary defense will be compelled to do practically all the tackling, and on such occasions the backs should "call" the forwards

on every piece of poor work. Should the line be opened up and the runner come through to the secondary in his full stride it will keep the forward up to his work if the defensive back will yell "That's on you, Bill," indicating the offender so that the rest of the team and even the supporters in the stand can see where the trouble lies. On the other hand, should the backs be sluggish and the line up to the mark, it will do no harm for the forward to call the back to task, saying, perhaps, "We had a hole for you. Where were you? When we make a boulevard like that you want to get started and get there." This sort of thing sounds harsh in cold type, perhaps, but it must be remembered that these men are working together, and working earnestly, and should not be blind to each others' faults any more than to their own.

I am no advocate of the actual slugging indulged in by some coaches, or the "booting" common to some teams. As a rule, a good hard slap on the back, with a few sharp words, will prove a real aid to the erring forward. In the case of the Captain praise should be mingled with blame, even when in action, and if he is a real leader his voice will be heard at all times. So long as the talking is confined to the business in hand and is not designed to annoy the opposing eleven, it will always prove, I think, a valuable asset to any eleven. Mere noise is of no value, and the team must always remember that when the opposing eleven is on the attack and the quarter giving the signals sportsmanship dictates silence so far as that is possible. In the case of a shift, requiring a shift in the defense, the talk of the defending players should be in low tones. Much of the defense is run by signals nowadays. Especially was this the case with the splendid Harvard eleven of 1912, but the signals were given in a low voice, by Parmenter, the Harvard centre, and all other talking of defense was confined to such times as the opposing quarter was not calling the series of numbers to his own team.



THE RESULT OF ETERNAL VIGILANCE

Sanford B. White's (Princeton) famous run in a Yale game after picking up a loose ball, that gave the Tigers the victory on a shippery field at New Haven. W. S. Langford, the Referee, is shown at the extreme right of the picture. The next figure is White. Just behind him are shown three interlovers of the Princeton team, from left to right as follows: Dunlap, end; Wilson, guard; and Capt. Hart, tackle. Dunlap is putting Capt. Lowe, of Yale, out of the way.

One more feature of talking on defense before passing to a consideration of signal systems. Every man on the defense should be constantly on the watch for the slightest indication on the part of the attacking team as to the direction of the play. Time and again when complaint has been made by a quarterback or team captain that the opposing eleven knew the signals the fact has been that the quarter or captain or others in the play themselves gave away, not the signal, but the direction and probable nature of the attack. To attempt to master an opposing eleven's signals is sheer waste of time, but to master the style of play and to discover peculiarities of individuals that are likely to give the play away is well worth while. When these little peculiarities are discovered by one of the backs he should at once apprise the rest of the team, or if there is not time for that, at least shout out the side of the line on which he expects the play to come. The same is true of the kick and pass.

I should say nothing at all in a work intended for sportsmen only about stealing an opponen's signals were it not for the fact that I want to emphasize the utter worthlessness of it. I know of a specific case in which the coach gave the signals of the opposing eleven to his own team just before the game. He had stolen them, or rather, they had been stolen for him. His team won the game, but the players forgot all about the stolen signals two minutes after the game started. Their own alertness was better than any amount of knowledge of the opposing eleven's code.

Now to a study of signal systems. I shall not attempt to go into their history beyond stating that they started with simple phrases, went through algebra and geometry, were occasionally picturesque, as for instance the old "Clear ship for action," of the Navy, and finally settled down once more to simple arithmetic. Some of the older systems were of the most complicated nature, and I

regret to find that there has been a tendency along that line in recent years. It is a tendency which if pace is to be maintained cannot endure.

It is a football axiom, I believe, or should be, that the simplest signal system is the best. One of the old-fashioned methods was to number every man on the team and every opening in the line, and this is still useful in the early season, when a host of candidates is being tried out, and there must be a common system that can be learned in five minutes or so. In such a system the actual signaling may be begun on the first, second, third, fourth, or in fact any number previously agreed upon. Thus a shift is easily made to mark the difference between the set used by the first eleven and that employed by the second. In these practice scrimmages there will be little attempt to fathom the signals of the opposing team, for the players know that the coaches are not impressed with proficiency in that line but are looking for real football players. This simple system may be carried along until the first eleven is about chosen and the plays that are to be used in the more important games are being taught. When this stage is reached the signal system becomes a matter of considerable moment, for it sometimes happens that the system chosen will have something to do with the winning or losing of the big game. One of the big Eastern elevens of 1912 owed its failure in part to a signal system that would have proved troublesome in the class room, let alone on the field. This system required several processes of thought, and I am not certain that it did not actually include multiplication. Subtraction is bad enough, but the multiplication table has no business in football.

The simplest possible signal system that I have been able to discover is one that includes a key number, a play number, and a starting signal. The last I shall discuss separately, for it is one of the advanced features of football

signaling. The key number being movable, the players who are waiting for it have nothing to do in the way of taking one digit from one number, another from a second, and so on, before the key number is given, and have the further advantage of knowing, under the simplest method that has come to my notice, that should the number be above nine, only the last digit need be heeded. In the system to which I refer, the key number is any number ending in 5 or 0. Thus 20, 15, 5, 75, 90, are all key numbers. Then follows immediately the number designating the play, after which the few numbers given may end in 5 or 0 without requiring any attention. Under this system, of course, the play number itself may end in 5 or 0. Thus, if the play number be 25, the signal may be, 32, 16, 35, 25, 27, 45, 18. The key number is 35, immediately followed by the play number, 25. The rest may be disregarded as they mean nothing and are used only to conceal the exact instant of the snapping of the ball.

The key number, of course, may be the first, second, third, or any other numbering ending in 5 or 0. The play numbers should be odd or even, I think, according as the play is to go to the left or to the right. Most men naturally associate even numbers with the right side, and odd numbers with the left. With such a system I am sure the coach will experience little difficulty.

But some, even of the biggest teams, require much more brainwork of their men. They will arrive at the signal number, for instance, by combining the first digit of the second number with the second digit of the third number. Thus, if the play number is 31, the signal will run, 26, 38, 21, etc. Again, in using the forward pass and placing kicks, there will be a number to indicate the spot to which the kick or pass is to be made. Even in such circumstances I believe the simplest method is to have one number for each play. It is easier to learn a set of numbers arbitrarily, and

become accustomed to recognizing them at once, than to do mental arithmetic under fire. Simplification of the signal system is another reason why it is a good plan for every member of the team to be familiar with the entire scheme of generalship. The tackle, for instance, will know, when he reaches a certain part of the field on a certain down, with a certain number of yards to gain, that the selection of plays will be greatly restricted. He will himself pick one or two out mentally, and will frequently hit upon the right one. He will catch his signal practically without thinking about it, but being prepared for a choice from a small number of plays, a change of generalship will be at once apparent, he will know that the quarterback is taking a chance, and will make his own effort with all the more dash, in the hope of justifying his leader in his choice by making the play go.

One of the commonest methods of arriving at the play number is to add the first two numbers or the second and third numbers. For instance, in the first case, if the play number is 22, the signal will run, 5, 17, etc. In the second case it will run, 13, 18, 4, etc. This is easy enough when a man is seated in an easy chair, but it is apt to be troublesome in the heat of a game. No signal system, I believe, should require a man actually to think. With every play numbered and a key number used, the prompt response to signals becomes a matter of habit.

Just how thoroughly rooted in a man's inner consciousness a signal system may become, was well illustrated in the course of one of Yale's games in the season of 1912. One of the Eli players had been temporarily knocked out, had resumed play, and seemed to be getting along well enough so far as the spectators could see. Captain Spalding had his suspicions, however, and stopped the game, calling Johnny Mack, the trainer, to inspect the injured player. First Spalding put a long string of signals in rapid succes-

sion to his player and the latter answered all of them promptly and accurately. "Let me at him," said Mack. "Now," asked the trainer, "How many goal posts are there?" "Sixteen," was the prompt answer. "How many grandstands do you figure there are?" was the next query. "Twenty-five," answered the injured one. "That's all," quoth Mack, "Good night; the side line for yours." The injured player was still straight on his signals, although mentally a blank on anything else.

Most elevens of the first rank use the starting signal, which is a great advantage when it works, and a severe handicap when it does not work. This signal enables the entire eleven to get just the slightest fraction of an advantage over the defense on the charge. The defensive players cannot make their charge until the ball is actually snapped, whereas, with the starting signal in use, the attacking forwards can start actually with the ball. Both players and ball go from the signal. As in all other signals there is a variety of methods in the use of the starting signal. Once again, however, tendencies toward complication should be avoided. The simplest starting signal I know of, and one that has been used by successful elevens of the first rank, is the repetition of the play number, or of some number the second digit of which is the second digit of the play number. Thus, using the system I outlined above, let us say that the play number is 28. The signal will then run, 4, 32, 15, 28, 66, 14, 48. The third number is the key number, the fourth the play number, and the last the starting signal, which repeats in its second digit the second digit of the play number. Another method is to start on the fourth, fifth or some other number in the signal sequence. This means, however, that there will always be the same number of numbers in the signal sequence down to the instant of the charge, and in such case the starting signal will be as valuable to the defense as it is to the offense.

On nearly every eleven in the country the signals are given by the quarterback, but it sometimes happens that a very green and uncertain quarter has to be used, and a responsible veteran in the backfield is chosen to give the numbers. This is a poor makeshift as a rule, and has sometimes led to disaster because the man who gave the signals was out of his element simply through lack of practice, no matter how well he knew the game, and no matter how good a general.

It would seem hardly necessary to state that the captain should be extremely slow to change the signal of his quarterback. Such a proceeding a few times does no harm, but when persisted in it absolutely ruins a team. One of Harvard's greatest teams a few years ago was reduced in efficiency fully fifty per cent. because of this very thing. Either the captain should have abandoned the policy of changing the signal or a substitute quarter should have been sent in. Better a fair individual player, who can run the team, than an individual star who has to consult with his captain or whom his captain deems it necessary to override. The final word, then, is simplicity, with the burden of running the team and calling the signals constantly on the shoulders of one man.

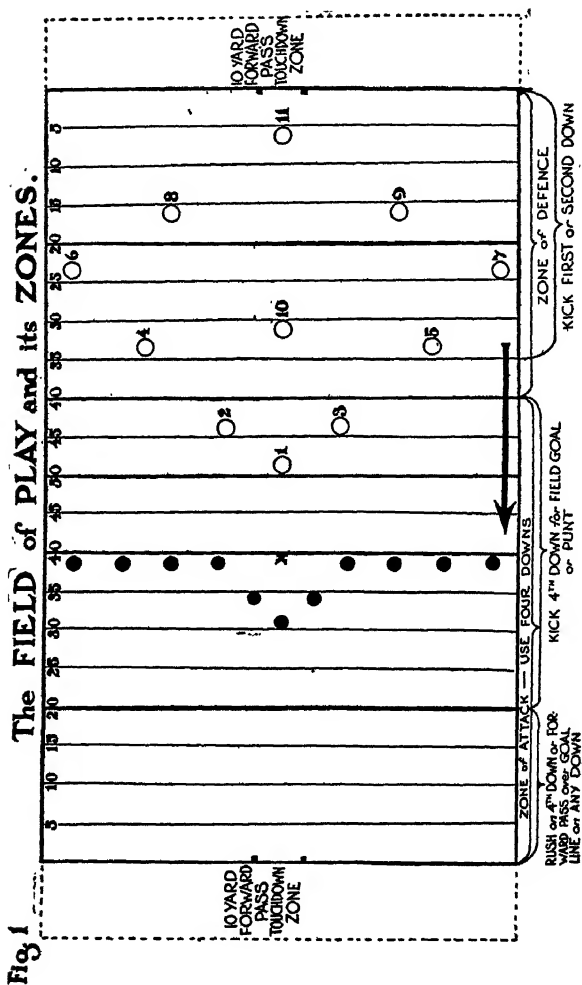
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CHAPTER X

THE FIELD AND ITS ZONES OF PLAY—SHIFTS AND THE SLIDING DEFENSE AGAINST THEM—THE KICKING GAME—THE FORWARD PASS—GENERALSHIP

TIME was when the football field meant to the average eleven merely a battle ground on which to make more consecutive yards than its opponent, never releasing the ball to the adversary until it was evident that no further advance could be made with the running game, and then kicking the leather as far down the field as possible. Each team began to run the ball as soon as in possession and without regard to the position on the field in which the team found itself. Kicking on first down was almost unheard of, and was resorted to only when the opposing eleven was fumbling badly or when there was half a gale behind the kicker. Happily all that is changed and to-day there are as many strategic positions on the field as if it were not flat but abounded in advantages of conformation.

In the diagram (Fig. 1) the field is shown with two teams about to start the game, the Black team kicking off, the White team receiving. The White team has chosen the goal favored by the wind, and as soon as the kick-off is received will therefore be considered the attacking eleven. The "zones" indicated in the diagram are laid out from the viewpoint of the White captain, who (presuming that in this case he has a really strong wind at his back) will use a fairly liberal form of generalship in the endeavor to score as fast as possible and hold this advantage in the second and third periods, starting the attack once more in the last

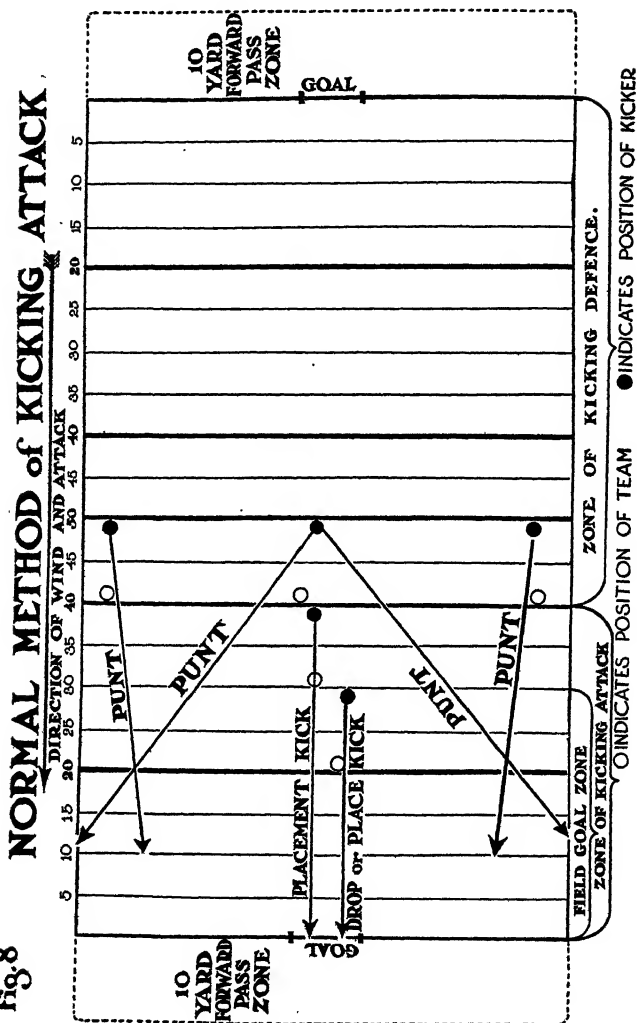


its quality of temporary bewilderment. One of its serious defects, not found in the other shifts, is that a clever defensive line may by fast work reinforce one side of the line or the other against the shift, taking care, however, not to be caught in motion at the snap of the ball.

A very simple and very effective line and back shift is shown in the diagram (Fig. 7). It results in a lop-sided line with a tandem of the backs behind the reinforced side. In this form of the shift the backs experience little difficulty in finding their new positions, and the play can be made to go very fast. It has been used with effect by the Navy, which in recent years has had players who were both powerful and speedy.

In recent years punting has reached a higher degree of efficiency as a factor in the actual attack than ever before, and a team that can boast of a strong punter, backed up by a drop and placement kicker, need not hesitate to tackle the best elevens provided the ends are fast and the defense strong, as was the case at Princeton the last time Princeton defeated both Harvard and Yale without the semblance of a running attack. Indeed, kicking as used strictly in the sense of attack has usually reached a higher state of efficiency at Princeton than anywhere else in the East, or the West either, for that matter. A team equipped as described at the beginning of this paragraph might well follow the use of the zones mapped out in the diagram (Fig. 8), which is markedly different from the zone arrangement in the diagram (Fig. 1). The diagram (Fig. 8) shows the team with the wind at its back. The "zone of kicking defense" in the diagram might even stop at the center of the field, had the team a kicker like Brickley of Harvard, were it not for the fact that it is wise to allow more room for the recovery of the ball in case of a blocked kick. In the zone of kicking defense our team will kick on first down, or on second down if a cross-field change in the

Fig. 8



position of the eleven be found necessary. If the punting duel is steadily maintained and our ends keep the enemy from running back the ball the team will eventually work past the center of the field, and there is always the chance that the enemy will fumble and our team recover the ball in his territory.

The territory within which it may be considered safe to open fire on the crossbar and the uprights is indicated in the diagram by the term "field goal zone" while the short punting attack may well wait until within that part of the field labeled in the diagram "zone of kicking attack." It is well to keep up the distance punting clear to the center of the field, I think, saving the crossfire and down the side-line punting until the enemy's forty-yard line is reached, taking care at all times that the ball does not cross the goal line.

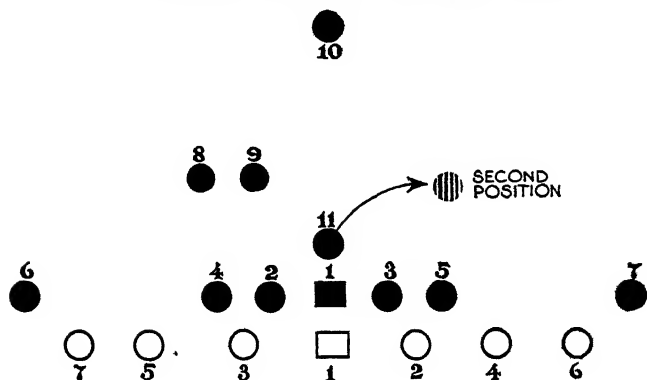
Once on the forty-yard line and near the center of the field the punter should put the ball out of bounds just short of the ten-yard line. To drive it down closer might be risky, for were the leather to strike just inside and take a bound inward the wind might carry it across the goal line for a touchback, and the touchback is the one thing to be avoided since the defense may bring the ball out and kick. Kicking out of bounds in this way prevents a run-back, and gives the ball to the enemy in an awkward position. When near the side-line the good kicker should send his punt straight down the field, short, rather shorter perhaps than as shown in the diagram, so as to guard against a touchback. Such kicks are easy for the ends to cover and exceedingly difficult to face. There is every chance here of a picked-up fumble and a touchdown. From the thirty-yard line the use of zones shown in the diagram calls for a placement field goal from scrimmage. The placement at this distance is, I think, preferable to the drop-kick, for it leaves an extra man behind the line to aid in recovering the ball in case of a

fumble. At the twenty-yard line the quick drop-kick is perhaps the better maneuver, for at this point the kicker can take plenty of room behind his line. When the team is on either of these lines and at the side of the field, the ball should be run out in front of the goal posts with no attempt to gain ground.

This particular scheme of kicking attack is planned especially for teams that are defensively strong and have a fine kicker and no running game to speak of, but a modified form of it might be adopted even by an eleven that boasted of a strong running game. There are variations innumerable according to the ability of the various units of the team, but the system diagrammed will serve as a basis on which to work.

The whole success of the kicking game, these days, depends upon placing more than anything else, for the burden of the defense against an accurate punter is very heavy and means a palpable weakening of the defense against the running attack. A fairly safe defense against punting from the kick formation on any but the fourth down is shown in the diagram (Fig. 9). Since there is danger of a run from this formation the ends may well go in fast to hurry the kick or prevent a run, while the two backs in the second line of defense close in a little in order to cover more territory in case of a forward pass. They can well afford to draw in a little, for they are still within reach of the enemy's ends, and if the fullback tries a run from so far back of the line they will still have plenty of time to reach the line of scrimmage as they have less distance to travel than the fullback. This formation applies only when there is considerable territory left to gain for a first down, for if there is only a little to go the chances are that another than the fullback will be sent into the line to make the distance. The two backs who are to handle the kick should be all the way from twenty-five to thirty-five yards

Fig. 9 **NORMAL KICK FORMATION**



○
10

○
8

NORMAL DEFENCE AGAINST
KICK FORMATION
ON 1ST, 2ND OR 3RD
DOWN

○
9

○
11

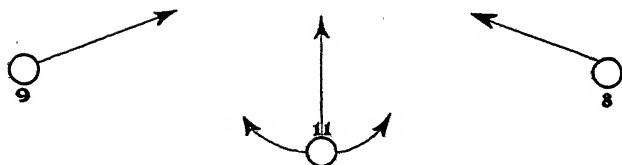
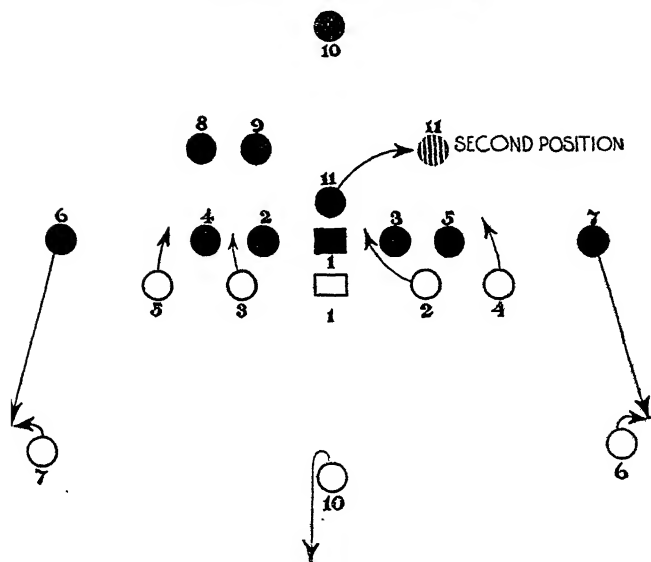
back of the line according to the ability of the kicker and the strength of the wind. It will be objected by some that the formation outlined is very dangerous, but against a strong punter who can place his kicks it is better to take the chance of a short gain or even of a forward pass, as a general rule, than to have a difficult kick go driving down the field many yards away from a solitary player in the backfield, as Yale and Princeton would have willingly admitted after facing the deadly punting of Felton of Harvard in the big games of 1912.

The loosening or tightening of the formation depends upon the position of the kicking team on the field, the number of the down, whether first, second or third, and the number of yards to be gained, and no amount of diagramming can supplant the use of brains on the field.

When the kick formation is assumed on the fourth down, save when the defensive team is well down in its own territory, a punt is almost certain to follow, and the whole aim of the defense is to run the ball back as many yards as possible. The diagram (Fig. 10) shows what is known as the "basket" or "nest" defense against this fourth down kicking. In this case the ends may be dropped back about five yards, the fullback may take plenty of room back of the line, and the three other backs should spread out all the way from twenty-five to thirty-five yards back, ready to cover the greatest possible amount of territory, and to assist each other by interference. When the opposing ends come down the field, the defensive ends do not try to check them at once, but turn and come down with them, turning them *in* if possible so that there will be a clear path up the side line. The fullback should also come down, turning in time to take care of the first line man down the field under the kick. The other two backs, once the ball is safely caught and there is no chance of a fumble, should put out of the play any men who have eluded the ends and

Fig. 10

KICK FORMATION (Fourth Down)



"BASKET" DEFENCE AGAINST KICK
FORMATION-FOURTH DOWN

the fullback, doing so without waiting for the catch should they be too close upon the catcher. If the downfield men are well put out of the play and there is plenty of time for the catch these two backs should make interference for their comrade, first calling to him the clearest path, that he may not be tempted to take his eyes off the ball before he has it firmly gripped.

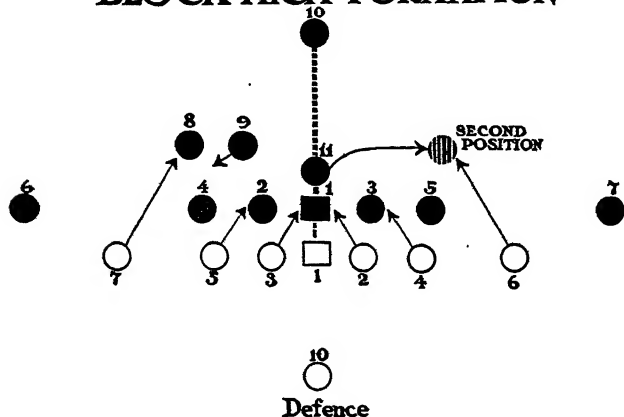
The arrangement of the men will depend of course upon their own personal range, the ability of the kicker, and the wind. In case the kicking team possesses a strong downfield line man who is a hard tackler, the fullback may well come up closer and make sure of getting so dangerous a man as he breaks clear of the line.

Of course one of the strongest defenses against the kicking game is to block the kick, and the best opportunities occur when the enemy is kicking from well down in his own territory. If he assumes the kick formation within twenty-five yards of his own goal line on first or second down it is a safe guess that the actual kick will be forthcoming, for to have his fullback thrown for a loss behind his own scrimmage line on an attempted run would prove a serious setback. There are many ways of attempting to block a kick, but any team that possesses a powerful pair of guards may well try the method used so successfully by Pennsylvania State College. In using this system, shown in the diagram (Fig. 2), the guards play closer to the center than usual and the other forwards close in a little. As the ball is snapped the ends go in fast and hard but make no attempt to reach the fullback. Their sole duty is to keep the protecting backs thoroughly occupied, shooting across and spilling them if possible. The guards, acting together, pull the opposing centre forward on his face, while the tackles shoot across and pull down the guards, or at least pull them away from the opening made by their own guards. The center, who has the shortest distance to go to the kicker, jumps through the

opening and leaps in front of the kicker. It is a very effective method when well executed, but it needs strong men. No attention is paid to the ends going down the field in this play, save that there are two men in the back field to handle the kick should it not be blocked.

The forward pass is perhaps the most rabidly discussed play in football to-day and there are hardly two first-class coaches in the country who take exactly the same view of its use. In some cases it has been used too often, and in

Fig. 11 "BLOCK KICK" FORMATION



others too seldom. It has won games for the team using it, and has cost games for the same team. "It is a boomerang," says one coach; "it is a play with a kick in it," declares another.

Now the forward pass is quite as valuable as a threat as an actual play and it was more because of the chance that the threat of it would spread the defense than because it

would work wonders as an actual play that the Rules Committee adopted it. In its first year very little use of it as a threat was made, and there was much grumbling because the play itself seemed so uncertain and was so often intercepted for long gains by the defense. Any time a back-field lines up with one man five yards or more behind the line of scrimmage the defense is menaced with a forward pass. Even if the pass is not forthcoming the menace must be reckoned with and there must be an opening out of the defense. It is its judicious use as play and threat both that marks the wise coach.

Perhaps the best criticism of it as an actual play was the danger to the team making it, for as kicks may be run back so may forward passes, and since the men sent down under the pass will be engaged in seeking to snatch the ball, rather than in watching the defensive backs, they will hardly be in advantageous position to bring down the interceptor of the pass, and there should be a great chance for a fast, alert, dodging back on the defense against the advance fling. With a quick getaway from the forward pass "eligibles," usually four in number, he will have to thread his way through a well-broken field of only seven men. His principal trouble should be in the form of the tackles, for they will come storming down the field for the very purpose of nailing the defensive back, albeit a man or two of the attack will have to be left well back up the field to guard against accidents. Of course an intercepted long pass is hardly as dangerous as an intercepted short pass, but there is danger in it just the same.

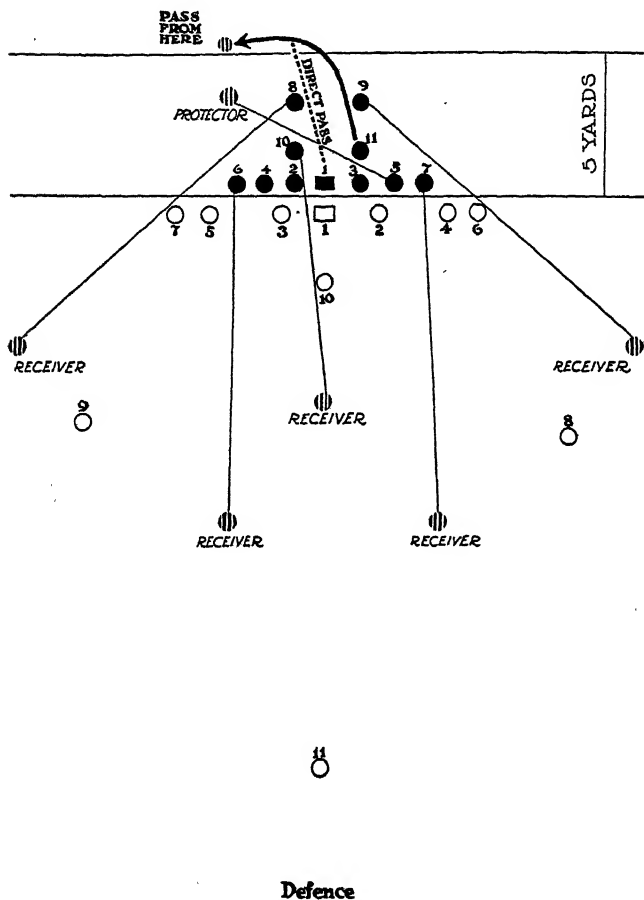
The long pass has the advantage that it need not necessarily be hurled very far to one side, and the players will be pretty well spread, whereas the short pass often goes sharply to the side and is, therefore, a trifle risky in the face of fast defensive backs. On the other hand, the short pass can be shot almost on a flat trajectory to its recipient,

whereas the long pass often has to be flung rather high, to some prearranged spot, ball and man arriving almost simultaneously.

Coaches differ as to where the line should be drawn between passing direct to the man and to some unoccupied spot, and as there are many minds there have been many plays in the past and will be many in the future to test the various theories. There is no denying the value of the play in attacking territory, no denying its possible value as a scoring play, yet for all that the forward pass zone behind the goal line was added in the rule-making less in the hope that the attacking team would make a touchdown with the play than in the hope that the threat of it would so spread the defense that the attack would have at least an even chance of crossing the line with the running game as a climax to a steady, well-planned and well-executed advance, ball in hand.

The elements of the forward pass are three—deception, delay, protection. It is obvious that no team making the pass wants the opposing eleven to know when it is coming. To this end it may be made from a variety of formations and threatened as well as actually made from regular formations which just before the ball is snapped do not have one man five yards back of the line of scrimmage. A player may one time run back as if to make the play and not make it; another time run back and actually make it. Again, the threat of it—that is with one man five yards back as the teams line up—should be cleverly mixed up with the actual play made from the threatening position. The pass should sometimes be made from the kick formation, and indeed, the fear of it should be in the hearts of the enemy most of the time. It might be objected that the enemy always being on the watch, the play would fail both as a threat and as an actual ground-gainer. This argument fails because of the fact that the defense must face other

Fig. 12
SIMPLE SHORT FORWARD PASS



plays and handle them and so be out of shape to handle the pass. The deception may be made even when men are going down the field ostensibly to take the pass, and the rest of the team well in motion, by the simple process of the back continuing his run.

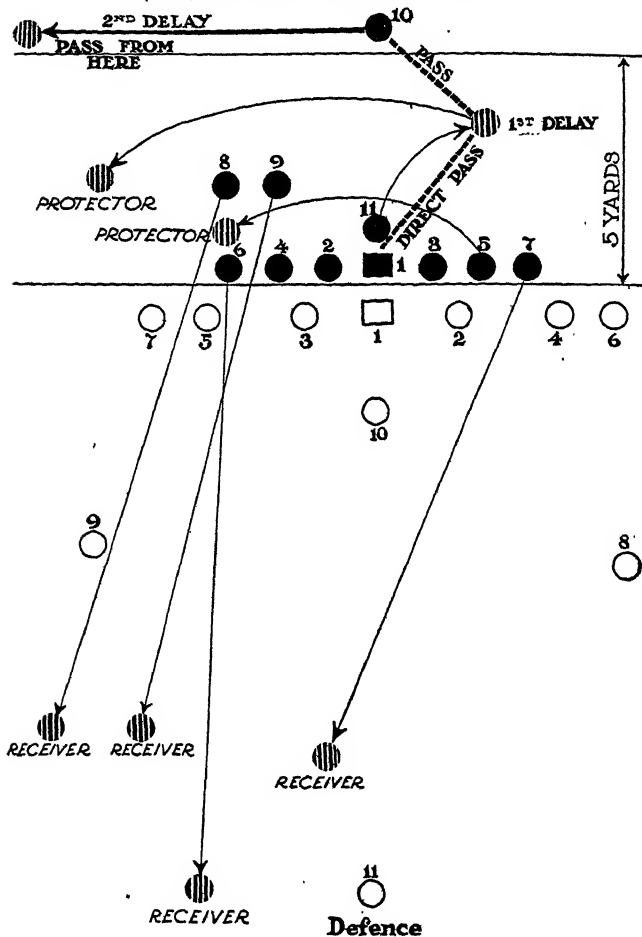
The second element, delay, is the most difficult. Various subterfuges have to be resorted to behind the line to give time for as many eligible men as possible to get down the field. In the case of a short pass less delay is needed, but even here it is valuable, for if the passer has the maximum number of human targets at which to shoot, he will the more quickly find one of them uncovered by the defense, for the defense cannot possibly cover five men. Four men will make serious trouble for the defense, and in the case of very short passing I have seen the play work when the passer had only one eligible to whom to hurl. In the accompanying diagrams (Figs. 12, 13 and 14) I have shown three examples both of deception and delay.

The third element, protection, is not so difficult as the other two, for a back may protect the passer as he does a kicker and then go down the field to cover the pass in case it is intercepted. In the diagram (Fig. 12) the protector is a line man. In the diagram (Fig. 13) there are two protectors, a line man and a back, while in the diagram (Fig. 14) the protection is afforded by the fact that the ball crosses the line of forwards, the "receiver" No. 7, at the right of the diagram, being only a bluff to draw the defense while the real receiver is found in No. 6.

I should not advise school elevens to try to use a line man as a protector, for it takes a skilled and active forward to cover the ground and get out where he will be of service, and even some of the big teams cannot use a line man as a protector. I have used line men as protectors in the forward passes shown in the diagrams because there have

Fig. 13

LONG FORWARD PASS (FROM KICK FORMATION)



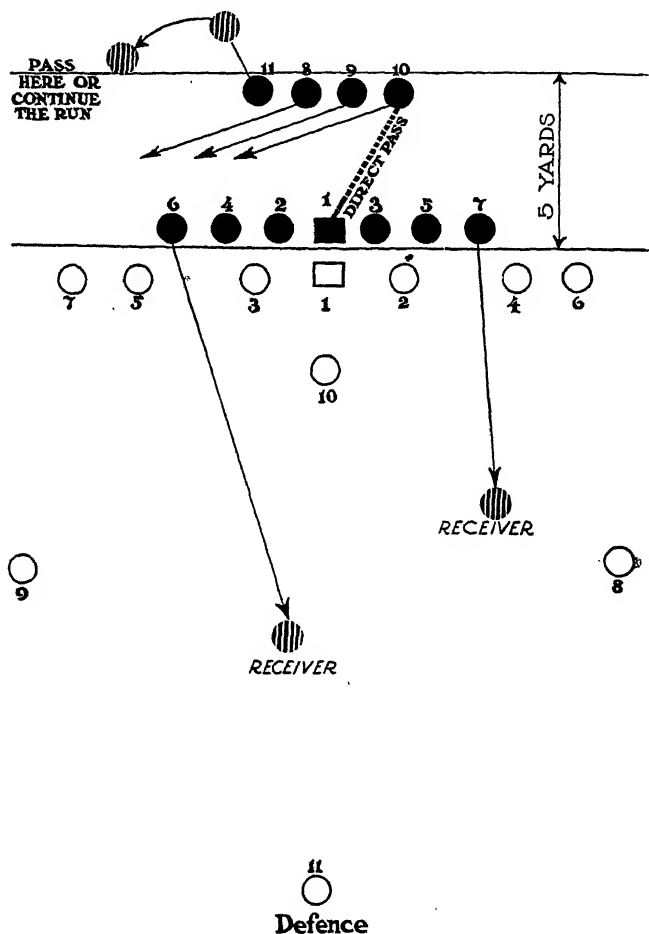
been many cases of their successful use, and I expect to see this feature of the play still further developed.

In the diagram (Fig. 12) is shown a sample of a short forward pass with the maximum number of receivers down the field. The play is made from the square formation of the backs. Since one man may be in motion toward his own goal line before the ball is snapped, No. 11 takes a flying start and turns to his left, receiving the pass on the run. He continues the run a short distance, careful always to be five yards behind the line of scrimmage, and then turns to locate his receivers. He is covered by the tackle, No. 5, who crosses from his position. Nos. 6, 7, 8, 9, and 10 go down the field with the snap of the ball, following the courses indicated in the diagram. The pass is made to the man in the best position to receive it. The run should have pulled the defense to the left, but since there is no protector to cover No. 9 the pass should never be made to him unless the nearest man of the defense has been drawn many yards away from him. If, however, the pass goes to No. 7, an interception thereof may be covered by No. 9. The play will have to be fast, for the distances are short.

A fair sample of the long pass is shown in the diagram (Fig. 13). In this the kick formation is assumed, but the centre instead of passing for the kick passes to No. 11 who holds the ball long enough to draw in the defensive end and then tosses it to No. 10, who makes the second delay by a run to the right, Nos. 11 and 5 crossing over as protectors. Nos. 6, 7, 8 and 9 go down the field with the snap of the ball, following the courses indicated in the diagram. When No. 10 sees his men in position he sends the ball away to the man who seems to have the best chance of receiving it. The defense should find considerable difficulty in covering the four men. The pass from this formation is easily varied by a run from time to time.

In the diagram (Fig. 14) is shown a forward pass that

Fig. 14
CHOICE of END RUN or PASS



may be turned into an end run. In this case, as explained above, no protector is necessary. The center makes a direct pass to No. 10, and Nos. 8, 9 and 10 start for the right as indicated by the arrows. At the snap of the ball Nos. 6 and 7 go down the field, taking the courses indicated in the diagram. No. 11 drops back as the run is started so as to be five yards behind the line of scrimmage and receives the ball from No. 10 as the latter goes past. The run is continued until it is apparent whether the secondary defense will be drawn up or will stay back. If it stays back the play is turned into an end run, whereas if it comes up the pass is made to No. 6.

These three plays are slight variations of others that have been in actual and successful use, and serve to illustrate, I think, the three principles of the pass. One of Harvard's passes in which the ball is thrown to the spot where the runner is to arrive is illustrated elsewhere in an actual photograph.

One last caution. The pass was never intended as a short cut to victory, but as a sound football play to be carefully worked up in conjunction with the rest of the attack.

In returning to the subject of generalship I cannot begin better than by asking the reader to compare the two full field diagrams already given (Figs. 1 and 8), especially in the matter of the zones. In the first of these the zones are laid out for a team supposed to have a powerful and versatile running attack, in the second the arrangement presupposes that the team is very strong in kicking and has practically no attack ball in hand. If these two arrangements of zones are sound, then some combination of the two will give a reasonable plan of generalship to the team that is of all-round calibre. If the team be a shade the stronger in kicking, then that is the point that will be emphasized, and if just a little overbalanced in running then it is upon that form of attack that the emphasis will be laid. One thing

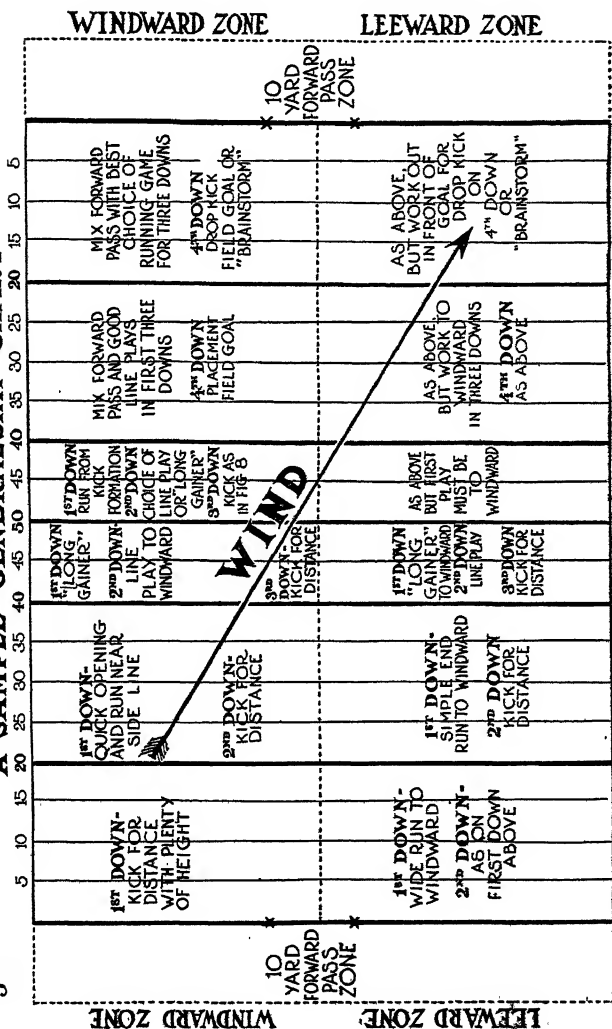
must never be forgotten, however, and that is that it is far better to kick too much than run too much.

So far in this study of generalship it will be noticed that I have always spoken of the team as having the wind behind it. This is for the simple reason that there is nothing for the team against the wind to do but use the running game for three downs even on its own side of the field, and kick low and hard and out of bounds on the fourth, with an occasional and carefully covered forward pass. Such a team must run its plays slowly, playing for time, and making as little exertion as possible so as to be fresh when its turn comes with the wind. There is this variation, however, that should a misplay by the enemy give such an eleven possession of the ball within reasonable striking distance the full strength of the running and passing games should be turned on in the effort to score, for the team that can score against the wind is quite likely to get the whip hand. Furthermore, the most powerful backs, who hitherto have been kept waiting on the side lines should be thrown into the game to seize their chance, the desultory and time-saving running game having been carried on by the second string backs who will not be used when the real running attack is turned loose.

Now if there is no wind at all, both teams, I think, should play about as they would if each had a mild wind behind it. This would mean that both sides would use the same fundamental generalship and the cleverest plays executed by the cleverest men would probably carry the day. The choice of these particular plays and their execution would show up above the broad base of the generalship that does not make mistakes.

Perhaps the best way to reach the combination idea of ~~kicking~~ kicking and running under the modern form of generalship, is to lay out for a hypothetical team a chart somewhat on the style of that shown in the diagram (Fig. 15). For

A SAMPLE GENERALSHIP CHART.



purposes of illustration and elucidation it is considered that our team has the wind and is receiving the kickoff, and that the wind is blowing diagonally down the field as indicated by the arrow in the diagram. Should the wind be straight down the field it means simply that we shall be saved the down that is required now and then in order to get to windward. Should the wind be blowing straight across the field it means that this windward down must carry us a greater lateral distance than would otherwise be necessary. So for the sake of illustration we are justified in assuming that the wind will be blowing about as indicated. The field is divided, then, straight down the middle, into windward and leeward zones, and every step we take, or nearly every one, down that field, will have to be taken with reference to our position in one or the other of these zones. One thing more before taking up the play—we must take for granted that we are facing a team that has no special weakness requiring special change in the generalship.

Now to our game. If in receiving the kickoff we cannot run it back beyond the twenty-yard line we shall find ourselves in either the upper or the lower quadrangle at the extreme left of the diagram. Having the advantage of the wind our first thought is to get on across the middle line as quickly as possible and with the least expenditure of effort. Obviously, then, we shall kick as high and as far as possible, the height being for the benefit of our ends whom we expect to hold the ground covered by the kick. If kicking from the upper quadrangle we shall do so on the first down that there may be no delay whatsoever. We do not want to run for another reason—because this is no situation in which to risk a fumble by passing the ball through the hands of three men. Further, we do not wish to give our opponent an idea of what sort of running plays we may have, lest he have them diagnosed when we get into his territory.

If, however, we find ourselves starting from the lower quadrangle we shall have to run the ball on the first down in order to get into the upper or windward quadrangle whence we may kick with less fear of having the ball blown out of bounds. This run will have to be wide and of the simplest description. Obviously the simplest is that in which the quarterback carries the ball, the leather thus passing through only two hands, and reducing the chance of fumbling to a minimum. So we run into the upper quadrangle, taking no thought of gaining ground, and then follow the kicking instructions given for that quadrangle. I may be asked why we should not make a forward pass and so make a good gain without losing the ball. The answer is that the chances against us are very great. The pass might be spoiled, which would cost us one down, but above all it might be intercepted, which is not to be thought of, since that would mean practically handing the game to the enemy.

Now should the reception of the kickoff find our team in the second of the upper quadrangles, or should we get there through an exchange of kicks, we may feel reasonably safe against fumbling, for the team has been in action and the nervousness is worn off. It may be, too, that the enemy, knowing we are playing the wind for all it is worth, will expect us to kick on first down. Let us then make our kick formation and shoot a man through a quick opening in the line and along the side line just to see if there is not a chance of a good-sized gain. Should a fumble ensue we have a man well back to retrieve it, and we are fairly safe. Again, we have wasted only one down and are still in the commanding windward position for kicking. So this time we kick on second down, not forgetting distance and height.

If the reception of the kickoff finds us in the second lower quadrangle we shall be wise to get to windward at

once, and to do so we shall use a simple end run, this time allowing the ball to pass through three hands, and not seeking to gain. We shall then kick on the second down as was the case when we found ourselves in the upper quadrangle.

Now we come to the narrow little zone between our forty-yard line and the centre of the field. Let us presume that either through our run in the upper second quadrangle or through a further exchange of kicks, we find ourselves on our forty-yard line. We can now afford to do a little running, for we are getting near the zone of real attack, and a big advance at this stage will keep the ball for us and give us the chance to score that much sooner. From this upper third quadrangle, then, we can try what is known as the "long gainer," a fairly wide run, cleverly devised, that if it gains at all will take us along ten yards or so. If we fail we can punch the line, say off or just inside the left tackle, and thus to windward, and make our kick on the third down. Of course, as I have said, if our attack is not much to brag of, we shall hold off our running game a little longer.

If our "long gainer" is to be used in the lower third quadrangle we ought to get to windward with it. Then, if it is successful, it will give us a first down in a commanding position, and if unsuccessful will still put us in such a position that we can try the line on the second attempt in the hope of making a first down. On the third down we shall waste no more time, but get in another of our long kicks.

Once over the center of the field we shall introduce a little more variety. Further, in exchanging punts we shall take care to make fair catches of our enemy's kicks unless the chance to run be most alluring. In the upper fourth quadrangle we might start with the kick threat and from it try a run. It is some time since we did that. If that fails our quarterback may try a line play if he finds that

the formation of the opposing defense invites it, or the long gainer again if in his judgment it has the better chance and will not carry us down into the lower quadrangle. The same general directions will govern our play from the lower fourth quadrant save that we ought to be sure to get to windward.

Across the enemy's forty-yard line at last, we shall be able to add more variety to the running attack, and the game will pass still further from the direction of the coaches into the hands of the actual general on the field, the quarterback who is running the team. By this time he will have learned whatever weaknesses may exist in the enemy's defense and should be allowed to play to them according to his best judgment, save that his forward pass should not be made on fourth down. He may mix it up with the other plays, taking care to keep in the upper half of the field, with the exception that the forward pass may go into the lower half, for if successful the gain will offset that disadvantage, and if a failure he will be where he was before with no more than the loss of a down. The fourth down, however, should find him in position to try a field goal from placement. If playing in the lower fifth quadrangle the same procedure should be followed save that by the fourth down we should be far enough to windward to try a field goal from placement.

When we gain the sixth quadrangle we should put forth our utmost efforts to score a touchdown, and to that end the quarterback will work, using his own best judgment in the choice of plays, holding practically nothing back, for it may be that we shall never again have the chance. If the running game takes us within the five-yard line with only one down left it is time to use the "brainstorm" or "scoring play," the play in devising which the coaches have put forth their best inventive efforts. If, however, we find ourselves with more than five yards to go for a touchdown

the quarterback will have to make the choice perhaps of his football career. He may stake all on the best devised forward pass in our list of plays over the goal line, or make sure of the points to be gained by the drop-kick process. He will be praised or blamed according as the game turns out and no outside agency can possibly help him here.

Such is a general plan of generalship that in the main I consider to be sound, for I have seen it successfully used, with only slight variations, again and again. It is offered here not by any means as a final plan, but merely as one that is sound enough on which to build and specialize. The actual plays I have suggested in the various quadrangles may be greatly varied, but it was impossible to make clear the general purpose of the plan without such suggestions. A hundred or more of these charts might be made, all different, without violating the basic principle. And this basic principle of the generalship of to-day is no mere theory, but the result of years of progress on the gridiron.

No matter what the plan of generalship used, here are three things that every team should remember: (1) With the wind play fast: against it play slowly. (2) Never use an original or high-class running play until in opponent's territory. The only exception is when beaten and there is only a minute or so left to play. (3) When tackled close to the sideline get some part of the body out of bounds so that the ball may be carried in.

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CHAPTER XI

COACHING FOR THE SPECTATOR—HOW TO FOLLOW THE MODERN GAME

So often has it been charged that American college football was a dull and profitless game for the spectator that the rule makers have sought constantly in recent years to open up the play so that there would be a better chance to follow the ball. At the same time the attempt has been made to bring out more sharply the work of individuals, so that it might be better appreciated by those ignorant of the technique of the game. In the old days the man in the stand saw little more than two struggling masses, pushing up and down the field. The object was sufficiently apparent, but not the method of its attainment.

After the radical changes in the laws of the game, however, the play swung swiftly to the other extreme, so that the spectator saw so much of the ball that he had little time or opportunity to watch anything else. The result was that while one object of the Committee, the opening of the play, was attained, the other, the bringing out of the work of those individuals who had little or no chance to handle the ball, failed of accomplishment to a large extent.

Again, while the old game was comparatively simple—concerned as it was almost entirely with masses—the coaches found so much opportunity in the new style for the bewilderment of the opposing eleven that they were soon able to bewilder the spectator as well, and along a new line. They introduced shifts of all sorts, both in the line and in the back-field, and the one great advantage of the old game—the

fact that in the line at least the same men faced each other practically from whistle to whistle—was lost.

The rules, too, have gradually become so intricate that even many good players are not thoroughly versed in them, and the general public seldom reads them. There remains then nothing for the spectator but to get some friend to teach him as much of the game as can be done in a half-hour session or so, and trust to his own good sense to acquire the rest. The man who is able to attend only one big game a year may well be excused for failure to make any deep scrutiny into a form of sport that often puzzles its closest students, but there is less to be said for the enthusiast who is able to attend an early season game or two. The attempt will be made here to give the average spectator enough of an insight into the game as he will witness it on the November day that occupies a prominent place in his date book to induce him to go on with a most fascinating study on his own account.

To the man who gets out to a game or two in the early fall I would suggest in the first place that he select a better seat than seems to have been his custom. I have seen a crowd of two or three thousand jam down into the front rows of the Harvard Stadium, in the early fall, although there was plenty of room at the top. The higher up one is, within reason, the better view of football will be got. Near the center of the field, and well toward the top of the stand, if not actually in the top row, is the choice position. From this post one gets an excellent idea of the work of the teams with relation to their positions in one part of the field or another, and an idea of how the generalship varies with the change in position. Again, in looking almost directly down on the elevens the body of one man is not hidden by that of two or three others, and there is a far better opportunity for accurate judgment of the merits of the individuals on the field.

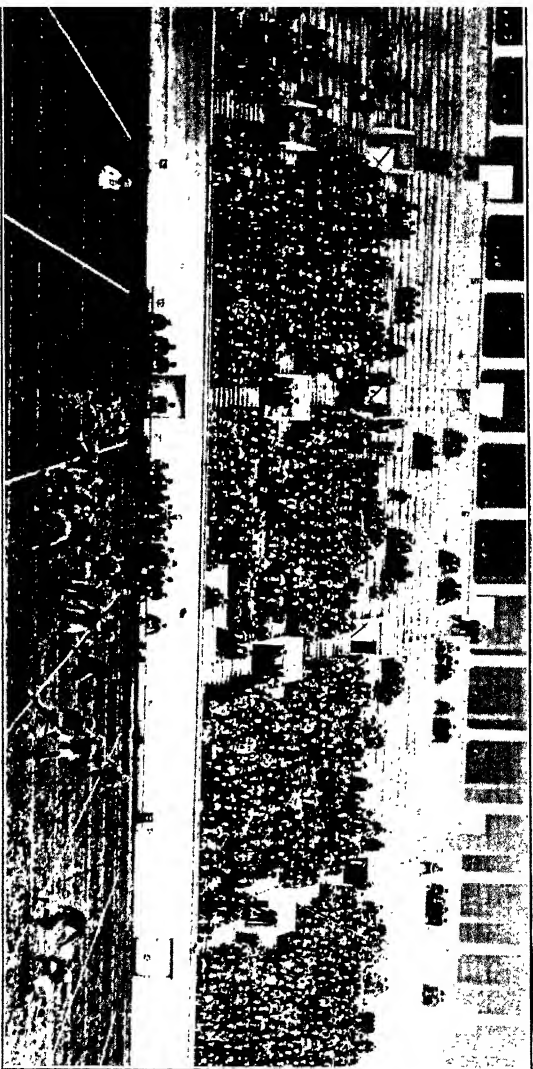


Photo. by Paul Thompson.

THE MISGUIDED SPECTATOR

He thinks that the nearer he gets to the side line the more he will see of the game. The illustration shows the wall of the Harvard Stadium in the course of a Harvard-Maine game. No one but a keen follower of football would go to see one of these early games. Yet the choice seats are empty, save for the wisest few who have stationed themselves in the topmost row. It is safe to say the "scouts" are there.

This high position in the stand with its consequent almost bird's-eye view of the field is generally sought by the team scouts as well as by certain of the coaches. If a coach could have the opportunity to make his observations from this point instead of from the side line in the course of an important game he would be happy indeed. Happily there is no means of communicating with the field, and the team therefore has to work out its own salvation without the aid of expert advice from the "crow's nest." It is one situation in which the spectator has the advantage of the coach to a large degree. Not alone does the running game stand out in stronger relief, but the course of the kicking is easily followed, and the various formations for the protection of the punter and the back receiving the ball are like an open book.

The single disadvantage of this situation lies in the fact that the openings in the line and the manner in which the runner takes them are not so clearly apparent, and for this reason it would be wise to watch one of the early season games from the end stand, albeit in a lofty position. From such a post the way in which the defensive backs come up to re-inforce the line, the width of the openings, and the judging of kicks can be gauged better than from the side, while in the event of a steady march down the field in the direction of the spectator the latter will experience a deeper thrill—more solid enjoyment than would be the case were he sitting in the side stand.

In the big game, however, the general plan is far more important than the individual work to be observed from one end, and the best place for the spectator is the one first mentioned. Of course, at a big game it is rarely possible to select one's seat, and the suggestions above have been made for the man who picks the wrong post even when he has plenty of room in which to wander.

In recent years there has been a demand that the players

be numbered, as is the case in Australia, but failing that it would be well for the spectator to evolve his own system of identification before the men take their places for actual play in the big games. There are many minutes of preliminary practice, and these are too often wasted by the onlooker in general enthusiasm and demonstration thereof when he might well be studying the teams individually and collectively. There is never a team the members of which look exactly alike. Each man has his own needs, likes and dislikes, in the matter of bandages, headgear and other protective armor, while each shows differences in stride and general manner of carrying himself. A little study of this kind would have saved from long-continued error many of those who witnessed the Harvard-Princeton game of 1912. Captain Wendell played less than two minutes in that contest, yet he was constantly cheered long after he left the game. The crowd was too busy to pay much attention to the score board, and since only about 50 per cent. of the undergraduates seemed to know what Wendell looked like, he got the credit for much of the work that was done by other players. Yet Wendell was one of the easiest men on the field to follow because of his short stature, his peculiarly heavy shoulders, his unusual method of running, and the black helmet he wore, which was like no other that had appeared on the field in many a day.

Some players wear white ankle bandages on one leg or both, some wear jackets, others jerseys only. There are differences in padding that are easily recognized after a little painstaking observation, and there are elbow, shin and shoulder guards that lend individuality to the wearer. Some men run higher than others, some take short steps, while others have a free stride. In short, no two men on the field are exactly alike.

One of the greatest aids to the spectator is the tendency nowadays to add some distinguishing mark to the men who

are to receive the forward pass. Under the rules the pass may be taken only by the men who have been behind the line or on the ends of it when the ball was snapped. This means as a rule the four backs and the two ends, and these are often distinguished by white cross-belts, white elbow bands, or white squares on the back. It sometimes happens, as in the case of the Navy in 1912, that a line man will be used to receive the forward pass—a guard or tackle—in which case he too will almost invariably be marked. Care must be taken, therefore, not to confuse this man with one of the ends. Again, it is sometimes the case that a line man or two will have some distinctive mark on the back which will aid the backfield in taking up their positions quickly and accurately when shift plays are used. If six or seven men are thus plainly marked, the difference between any two of them must be found by a quick comparison of size and weight.

It is of special importance to get a line on the kickers, one of whom may be left-footed, in which case the main protection will be formed in front of his left side. Thus, whenever, after the game starts, the protection is formed on the left side, it is safe to assume that the kicker will be the left-footed man, and vice versa. Before the game the players will practise punting, drop and place kicking, the team frequently using a different man for each of these duties, and it is important to follow their practice as closely as possible, so that once the game starts the instant a man drops back of the line the spectator will know at once for which function he is there. If he has not been dropped back for his specialty the move has been made as a blind, and something novel may be expected. Under the most recent change in the rules the punter no longer has to kick from a position five yards back of his own line, and while in the defensive half of the field the punting will probably be done from a point fully eight to ten yards behind the forwards,

the punting in attacking territory will often be done from close behind the line. In this case the spectator will have to fall back on his study of identity, for there will be no special formation to mark the play.

While this study of identification will have to be done in the course of the preliminary practice, there will be plenty of time for the spectator to speculate on the effect of weather conditions. The wind is the most important factor in football generalship to-day, and all other things being nearly equal the team making the better use of it will win the game. It is important for the spectator to get an accurate idea of the strength and direction of the wind so that he will be able to arrive at a just estimate of the work of the kickers and the play of the ends who are covering them. To this end he should observe the drift of the clouds, if there be any, and watch the flags in the topmost rows of the stands, for at a point lower down the flutter of colors will be deceptive. Granted a fair wind the team that wins the toss will choose to defend the goal favored by the breeze, making one of the most important moves of the game. This team, the spectator must know, will make the utmost possible use of the kicking game, while the other eleven will resort more to running in order to use up time.

When there is little or no wind the sun becomes an important factor, and the team winning the toss will choose the goal with the sun behind it. At most fields the wind drops rapidly as the sun lowers, and the advantage of natural conditions is not supposed to be so great as a rule in the latter part of the game.

The condition of the surface of the field is worth noting carefully, for it has a bearing of great moment on the choice of plays. In heavy going weight is a serious factor, while the value of speed, and especially of shift plays that depend upon perfect timing, dwindles rapidly. The kicking game also suffers, for it is difficult to get the ball up cleanly,

especially when drop or place-kicking. An excellent example of this was the game between Yale and Princeton at New Haven in 1911. The sky was clear and there was a high wind, but the condition under foot reminded one of the first week's work on the Panama Canal. The Yale eleven was led by Arthur Howe, who had made a considerable reputation as a drop-kicker, and was equipped with a sufficiently versatile midfield attack to bring Howe many times within striking distance of the Tiger goal. Indeed, the running attack was so well planned that many of the Eli coaches believed it would be good enough for one touch-down. Failing that it was confidently expected, and with sound reason, that Howe would be able to score from the field not once but two or three times. As it turned out, however, the Yale backs could not keep their feet even when there seemed every chance of getting clear, and frequently fell, sliding in the mud, with no Princeton player within tackling distance. Even so, they made enough ground to give Howe half a dozen chances to score by drop-kicking, only one of which he was able to accept. He found it simply impossible to get the ball up. Time and again the leather slipped in the mud just as his toe swung forward to meet it, and thus Yale's whole cleverly planned game went for nothing against an eleven that showed practically no running attack and was forced to depend entirely upon clever punting and covering of kicks, plus the opportunism that resulted in Sam White's long run for a touchdown and victory.

Now the point I want to emphasize is this, that as Yale's style of attack and probable method of scoring were well known even to the general public before the game, the average spectator, had he taken careful stock of the weather conditions, must have realized at once that nothing but good fortune could give the victory to the Blue. If sun, wind and heavy footing have such a serious effect, hard

rain, or indeed, even a drizzle, will also prove favorable to one team or another. Any eleven that has been placing a great deal of dependence in the forward pass will find the long heave, and sometimes even the short one, all but impracticable in the rain. The spectator must rearrange his estimate of the teams accordingly.

So much for what the onlooker ought to take into account before the game. As soon as possible after the kick-off he should school himself to a disregard of the ball for the time being. This is perhaps the most difficult task of all, for there is a fascination in following the ball that grips even the more experienced watcher, and makes it difficult for him to stick to his original plan. With the exception of a run for a touchdown from the kick-off, or a fumble or blocked punt, the first minute or two of play are not likely to produce anything that will be missed by the man who is not following the ball. Since plays succeed or fail through the combined work of the entire team, it follows that the man with the ball may be yards away from a team mate who is doing yeoman service in keeping a player of the defense out of action.

The very first thing to note, and note carefully, therefore, is the work of the two sets of forwards. The team playing against the wind will probably start a running play or two soon after the game begins, and even if the first play be from kick formation there will be instant opportunity to size up the "jump" of the lines, for upon this "jump" the result of the battle may, and often does depend. Should the forwards of the team carrying—not kicking—the ball, get a little the better of the charge and get it as often as twice out of three plays, the fact is significant, for under the rule these men are not allowed to use their hands, must charge across the neutral zone between the lines, and have more difficulty in reaching the defensive players than the defensive men in reaching them. Further,

they must reach the defensive forwards in a certain way if their charge is to be effective, and an ability to do so shows at once a superiority that, if continued with any degree of consistency, will mean all the difference between good and bad line play. The advantage, so far as the line is concerned, lies with the defense.

In the line-up the backs of the attacking forwards must be kept straight if they are to play as they have been taught, and humped backs are an instant indication to the spectator that the men are not doing their work properly. Again, the perfect charge goes to the count of "one-two-three," and when a line is found answering to this rhythm the onlooker will know that it is giving of its best. It is possible, of course, that the work of the attacking line will be uneven, but if the men are in good physical condition, and they have reached their best form more than a day or so before the big game, their play in the first few minutes of the game is apt to furnish a fair criterion for the entire afternoon. The exceptions to this are numerous, but they prove the rule.

Now in watching this line at work the eye must exclude absolutely everything else, taking in the runner only as he reaches the line of scrimmage, and in case forwards are found going clear through to the secondary defense they should be followed to the end of their charge to ascertain whether or no they have accomplished their purpose of accounting for at least one man beyond the line of scrimmage. Just a moment before the ball is snapped many of the forwards will have one knee on the ground, but the men will come up together to the crouch at some part of the signal, and if one man is behind the others he may be put down as a weak member. Absolute unison is one of the sure signs of a good set of forwards.

In plunges through the line there must be an opening for the back, and it is the way in which these openings are

made that stamps the attacking line as successful or otherwise, always remembering to give due credit to brilliant defense. If there is the slightest check as the runner strikes his opening it means either that the attacking forwards are at fault, or that the defense is strong. It is in this close work in the line that it is so difficult to apportion justly the praise and the blame for the success or failure of the plays, as the case may be.

The study of the defense is equally complicated, for the players have more range, and that slight natural advantage that goes with letting the other fellow have the ball. There is more latitude in the position of the defensive player than in that of the attacking forward, and it is here that individual genius crops out. The men will be swinging their hands, now, and using them freely on the charge. The use of the hands should be closely watched, for as I explained in the chapter on technique, it is one of the foundations of line defense. It sometimes happens that both lines will be charging better on defense than on attack, in which case the spectator may look for difficulty in using the running attack, and a low score, while should both be charging better on attack than defense the running plays of both teams are likely to be effective, and there may be scoring on both sides, with a chance that the totals will be high. Of course, when one line is charging better than the other both on attack and defense, the game will be theirs, if supported by any sort of a backfield.

The play of the backs may now be taken up, and the ball followed only on its journey to the player who is to carry it, after which each back should be watched in turn to get an idea of his versatility, and to learn whether he is of full value to his eleven when not carrying the leather. The interference is especially important. Are the men getting their opponents out of the play to stay, or are they only bumping them momentarily? How many men are on the

ground after the backs have passed the line of scrimmage? These are questions that should be answered at the earliest possible moment if the spectator is to enjoy the game to the full. Quick starting, clean handling of the ball, mutual helpfulness, always remembering that the rules no longer permit a man to push or pull the runner—these are the signs of a smoothly working set of backs.

On the defense the positions of the backs should be carefully noted, shutting out in the course of this observation the attack until it reaches the line. Under modern conditions a team is heavily dependent upon its secondary defense. The backs must come up to the line fast, and their tackling must be deadly. If any of the defensive backs is being put out of the play it is well to note how and by whom, for the man who is doing it is playing sterling football for his team. But if a forward is doing the execution rather than a back, and if he is doing it before the attack reaches the line, then there is cause for finding the back wanting in one of his most important duties.

With the close offensive and defensive work of the backs fairly mastered, the onlooker should take up the kicking game, watching in order: the line, the protecting backs, the kicker, the defensive line, the defensive backs, and the work of the men down the field. It is a good plan in studying the line on kicks to begin with the center, then to take the guards, tackles and ends in pairs. In the case of the center his passing is of the utmost importance. If he is not sending the ball back with a single sweep, but is raising it slightly from the ground before sending it back, his team is in for trouble, for not only will the opposing team know when a kick is to be made, and when a short pass to a runner, in which case there will be no temptation to raise the ball before shooting it back, but the opposing center will try to spoil the pass, since the ball is in play the instant it leaves the ground. The center must block longest of any of the

forwards, since through his position is the shortest path to the kicker, and if he lets a man through him now and then he is not playing up to standard. The guards block next longest to the center, and they too should prevent any man from coming through until the back is all but rid of the ball.

If men are coming through the line anywhere from tackle to tackle it means that the kicker is not getting the protection to which he is entitled and that a blocked kick need not be a surprising result. The tackles have more latitude in their protection of the kicker than the guards, and the tackle on the side of the line opposite to the kicker's foot may get away a little ahead of his mate. As a general rule they may start down the field the instant the ball has reached the kicker. The ends go down the instant the ball is snapped and therefore are not counted upon as protectors.

The protecting backs, two of whom are on the same side of the line as the punter's kicking foot, are supposed to care for men coming through the tackle positions or from end in an attempt to block the kick. Of course they must above all things stop any player who sifts through the line inside the tackles. This latter, however, is a situation that they will not have to confront if the forwards are doing their work. The protecting backs should spill their men completely, so that no man is leaping in the air, especially on the punter's kicking side, when he sends the ball away.

The next man to watch is the punter himself, who may be either a "one-step" or a "two-step" kicker, which means that he takes either one or two steps when he sends the ball away. This watching of steps, of course, does not apply to the kicker when he is making a short run to one side in order to gain a little time. As a rule, however, the kicker makes no adjustment of the ball in his hands, getting it into position to drop to his instep simply by turning the hands, drops it at once, takes one step with the foot with which

he is not to kick, and then sends the ball away. The "two-step" kicker may get a great deal of distance, and be able to take enough room behind the scrimmage line to be sure of getting the ball away, but with close kicking once more in the game he will not be as valuable to his team as the "one-step" man.

The kicking system carefully observed, the spectator may turn to the defense against it, noting carefully whether the punter is outkicking his ends so that they are slow in getting to the catcher, or whether these down-field men have been held up on the way by clever blocking on the part of backs or ends of the receiving side. He should watch carefully to see whether the defensive ends are played back of the line against a palpable kick formation, or kept on the line to hurry the kicker, for this will be an indication of the general style adopted by the team. He is apt to find that a team that plays a "waiting end" defense on regular line plays, will play the ends back much of the time against a kick formation, no matter what the number of the down.

All these points settled, the man in the stand may profitably turn his attention to changes in the system of play from the normal—watching the formation of the backs, whether square, diagonal, "L" or any of the more common styles, and keeping an eye out for shifts in the line or back-field. In this, of course, he will have to keep an eye out for individual identification marks, but the matter will be greatly simplified if before the game he has made some study of the diagrams accompanying Chapter VI.

One of the most important points is the activity of the forwards in the interference. The spectator should strive to find out just which men and how many swing out of their places in the line to join the interference, and whether the tendency to use the forwards in this way is greater than the leaning toward sending them straight through to the secondary defense. It was a long time in the season of 1912 before

even some of the experts realized that Yale was constantly seeking to use sometimes one guard, sometimes two in the interference, and the great mass of spectators never did know it.

It may be that the man who is watching the first big game will have a long wait before he has a chance to see the forward pass in action, and he may be fairly sure that it will not be used in defensive territory—but the principal thing of which to take note when it does appear, is whether the ball is thrown to a particular individual who has already taken his position, or whether sent away to a spot where a player is supposed to arrive simultaneously with the ball. The latter method is the greater "chance-taker," for there is considerable danger that the fling will be intercepted for a run, and the more risky method should be "covered" by some player who will be ready to make a tackle should a player of the opposing team snatch the ball in mid-career. The spectator may well approve a pass so covered, and condemn a pass left unprotected.

At the end of the first half it is a good plan to go in for a mental recapitulation that what happens in the second half may be the expected rather than the unexpected. Has one team done a great deal more running than the other without once getting inside its opponent's 25-yard line? If it has, and it is behind in the point total, or there has been no scoring, then it is in worse case than its opponent, on general principles. Has the team with the wind behind it scored? Then when facing the wind it may play for time and conserve its energy with better than an even chance of success. If, on the contrary, the team that had the favoring wind, has frittered away its chances, it is not a sound team, and finds itself in a dangerous position. Upon the answers to these questions and an analysis of the general play may be built a fair prophesy of the ultimate outcome.

Right here the matter of condition plays an important

part, and it is often too subtle a problem even for the expert. Under the modern rules men are more apt to become exhausted on the field through their own efforts than because of the constant bumping into their opponents. That is why it is so important to contrast the amount of the work done by the two teams in the first half. A finely conditioned eleven will last through, even though worked more than it ought to have been in the wrong field situations, but if there is any tendency toward "cracking" it should show as soon as a team is on the defense after a period of hard and perhaps fruitless work. The spectator must remember that a tired team will be apt to come to life if it is able to score and so tie up the game, and in the case of sheer grit no rules apply.

I think that if the spectator will follow the suggestions given above he will come nearer than he has in the past to grasping the scheme of football, and so getting more enjoyment out of it, but it means that he must make up his mind to do a lot of thinking while the teams are in action until such time as he can safely follow the ball and at the same time catch the other points of play as a matter of mental habit. His interest in football as well as his understanding of it will also be increased, I feel certain, if he will study the game after it is over with more care than is usually the case. He should compare his own opinions of the team and individual play, and of the generalship, with those of other men who have been trained to watch it carefully, and so the better prepare himself for another season.

There breathes no human being so keen that he can follow a football game from start to finish and catch every one of its finer points, but it is within the powers of every man to get into much closer touch with it than has been the case with the mass of football followers in the past. While it would be a good plan for the spectator to make some

study of the rules before the season opens, it is doubtful if even then he would understand the infliction of penalties thoroughly, as he sees them on the field. I am giving here a summary of the penalties and their causes which may be of more value in a hurry than a search through the rule book. I am also undertaking to remind the spectator of the fundamental laws of football that affect almost every play, not attempting to rewrite the rule book, but to call attention to the restrictions under which the teams have to work in a general way. The distance penalties, then, are as follows:

LOSS OF TWO YARDS

Time taken out more than three times in the course of a half. (This is a most unusual penalty, and I have never seen it enforced. There are occasions when for lack of substitutes and because of recurring injuries more time out is needed than is allowed in the rules. In such a case it is common for the captain of the team offended against to waive the penalty.)

LOSS OF FIVE YARDS

Violation of the offside rule, illegal positions, etc. (a) at kick-off; (b) at scrimmage; (c) at kick-out; (d) at punt-out; (e) at try-at-goal; (f) at free kick: player out of bounds (more than one violation in same scrimmage); putting ball in play other than as provided (more than one violation in same scrimmage); guard carrying ball; feint to snap ball; attempt to draw opponents offside; player attempting fair catch taking more than two steps after making catch; unreasonable delay; interference with opponents before ball is put in play; holding by the defensive side (i.e., holding or otherwise interfering with the hands and arms or actually tackling a man or men not in possession of the ball).

save in a bona fide attempt to get at the runner); crawling by the player carrying the ball; illegal tackling; unfair play not specifically covered in the rules.

LOSS OF TEN YARDS

Interference by defensive side in case of forward pass. (This section of Rule XVIII is so important that I give it here in full: "No player of the side which did not put the ball in play shall in any manner interfere with an opponent who has crossed the line of scrimmage until the ball has been touched, except in an actual attempt to catch the ball himself. If a team makes a forward pass the ball is considered to be still in its possession unless and until the pass has been declared incomplected or has been recovered by the opponents.")

LOSS OF FIFTEEN YARDS

Failure of substitute to report to Referee or Umpire; illegal return to game; player leaving field during one-minute intermissions; interference with a fair catch; throwing player who has made fair catch; pushing, pulling, interlocked interference, etc. (It should be borne in mind in connection with this rule that the player with the ball may place his hand on a team mate but not take hold so as to be pulled along. Nor can any of his own side drag him to his feet that he may get under way again); holding by side in possession of the ball. (There are four "dont's" the violation of which bring about the infliction of the penalty. They are: grasping an opponent with the hands or arms, placing the hands upon an opponent to push him away from the play, encircling in any degree any part of an opponent with the arm, and, using the arms in any way to lift an opponent in blocking. It is of the utmost importance that the spectator remember these, for the holding penalty is one most

frequently inflicted); forward pass by side not putting ball in play; piling up; hurdling; tripping; tackling out of bounds, etc.; sideline coaching; persons on field without permission of officials; more than one person walking on sidelines. .

So often does one hear the cry of "hurdling" from the grandstand, and so seldom is the hurdling penalty imposed immediately thereafter, that it is well worth while getting an accurate idea once for all of what hurdling as the officials understand it, really is. The rule offers no definition, but hurdling in football is like hurdling on the track, a deliberate attempt to clear an obstacle by leaping when in full stride with the knee of the leg in advance well up, and quitting the stride for an instant for that purpose. In other words, hurdling in football is *not* striding or running over the bodies of prostrate opponents. Furthermore a player on one knee may be hurdled without penalty. Hurdling in football is extremely rare nowadays.

LOSS OF TWENTY-FIVE YARDS

Team not ready to play at start of second half.

LOSS OF HALF DISTANCE TO GOAL LINE

Player disqualified for striking, kneeling, kicking, etc.; foul within the one-yard line. (This last is to prevent the inflicting of the customary penalty carrying the ball across the goal line.)

These are all the distance penalties, and with a little application they may be learned without delving too deeply into the verbiage of the complete rules. There remain, however, other important penalties, as follows:

LOSS OF A DOWN

Interference by side making a forward pass prior to a fourth down; illegal forward pass prior to a fourth down;

forward pass striking ground prior to a fourth down; (it is interesting to note here something that may puzzle the spectator. He will see a player run back some distance preparatory to making a forward pass, only to find all his men covered, or the defense through on him so fast that he cannot be sure of making a good pass, then throw the ball to the ground only a few feet in front of him. There is no cure in the rules for this. The passer simply accepts the penalty of a down deliberately rather than lose a great deal of distance in the event of being tackled, or risk making a wild fling. It is undoubtedly against the spirit of the forward pass rule, as it nullifies excellent work on the part of the defense, but is not against the letter.)

LOSS OF BALL

Ball kicked out of bounds unless touched by a player entitled to touch it, in which case it goes to the player first recovering it out of bounds; interference by side making forward pass on fourth down; backward pass, out of bounds, on fourth down; illegal or incomplete forward pass on fourth down; if forward pass be illegally recovered or touched by passer's side; forward pass out of bounds on the fly; batting the ball; offside player touching ball; kicker recovering ball.

SUSPENSION

Illegal return to game (this is of course an individual penalty, the team itself being penalized fifteen yards as mentioned above); illegal equipment; unsportsmanlike conduct. (Herein there is wide discretion. The idea of the penalty is to prevent the use of abusive and insulting language to players or officials and also prevent such a maneuver as that employed by Carlisle against Harvard some years ago when an Indian ran the length of the field for a touchdown with the ball concealed under his jersey.)

DISQUALIFICATION

This is the individual penalty for striking, kneeling, kicking, etc., that goes with the team penalty of half the distance to the goal line, roughing the fullback. (The term "full-back" is here used to indicate the kicker. Since the kicker under the rules cannot run down the field and put his own men onside, or recover the ball himself, it follows that roughing him is sheer wanton "muckerism" which should be punished by the harshest individual penalty in the code.)

FORFEITURE OF GAME

Refusal to abide by the Referee's opinion as to length of game; refusal to play within two minutes after order by Referee; refusal to allow game to proceed.

The scoring of a touchdown, goal from touchdown, and goal from field, whether by drop or placement kick is fairly understood, but the scoring of a safety has probably puzzled more onlookers than any other play in the game. The average spectator is inclined to believe that there is only one way of scoring a safety, which, of course, counts *against* the team making it, but in reality there is more than one way, and so important is the rule governing the play that I give it in full, suggesting that it be carefully examined. Here it is:

"A safety is made when the ball in possession of a player guarding his own goal is declared dead by the Referee, any part of it being on, above or behind the goal line, provided the impetus which caused it to pass from outside the goal line to or behind the goal line was given by the side defending the goal. Such impetus could come from:

"A kick, pass, snapback or fumble by one of the player's own side.

"A kick which bounded back from an opponent or from

one of the kicker's own side, who, when struck, was behind his goal line.

"In case a player carrying the ball is forced back, provided the ball was not declared dead by the Referee before the goal line was reached or crossed.

"A safety is made when a player of the side in possession of the ball makes a forward pass which becomes incompleting behind his goal line or commits a foul which would give the ball to the opponents behind the offender's goal line.

"A safety is made when the ball, kicked by a man behind his goal line crosses the extended portion of either sideline."

Quite a little more to it than would have been suspected by one who had not kept up with the changes in the rules.

Now when a touchback is made the crowd often does not understand why it was not a safety, apparently having reached the conclusion that as soon as a man of the defending side was down with the ball behind his own goal line he had made a safety. The fundamental difference is the impetus which sent the ball across the line. But there is one important instance in which a touchback is made even when the impetus that sent the ball across the goal line came from a player of the defending side. The exception should be noted carefully, since the situation has frequently arisen only to puzzle the entire crowd and call down condemnation on the head of the devoted Referee. I give in full the two paragraphs of the rule covering the case:

"It is a touchback when a player on defense permits a ball, kicked by an opponent, to strike his person and then roll across the goal line and he or any player of his side then falls on it back of the line." (This always looks like a safety to the crowd.)

"It is *not* a touchback if such player juggles the ball so that he in any way forces it over the line and he or any player of his side then falls on it."

Just one other point that affects the kicking game and

causes much misunderstanding among spectators, and I shall leave the dry rules to the tender mercies of the officials. When a player going down the field under a ball kicked by his own side—he is what is known technically as offside—is touched by the ball before it touches an opponent, the ball goes to the opponents on the spot where the foul occurred; with *one exception*—when the offending player is touched by the ball before it touches an opponent *inside* opponent's 10-yard line it is a touchback for the defenders of the goal.

Now for certain fundamentals that must be remembered if the spectator would follow the play intelligently:

When a team is on the offensive and takes up the running game there are eight men who are permitted by rule to carry the ball on the direct pass from the center. The three exceptions are, the center and the two guards. But while the center cannot run with the ball at all, the guards may run with it after it has passed through the hands of some player, presumably the quarterback, other than the center. Further it is unlikely that a tackle or end will run with the ball on the direct pass, although it can be done.

When the offensive team is to make a forward pass the rules require that the passer must be five yards behind the line of scrimmage when the ball is thrown. The passer may take up the legal position before the ball is snapped, in which case, while any play may be made, the spectator would do well to be on the lookout for the pass; or, the passer may reach the legal position by running back five yards after receiving the ball from the center, in which case the spectator will have ample warning that a forward pass is to be made.

The onlooker must remember that there are only six men eligible to receive the pass—strictly speaking only five, since the man who makes the throw must be counted out—and that these men are, under the rules, the two playing

on the ends of the line when the ball is snapped, and any man at least one yard behind that line. Since there must be seven men on the line it follows that the remaining eligibles, after the ends are considered, must be the backs. But it often happens that there is some very tall and powerful man in the scrimmage line who is a good receiver of the forward pass. If the spectator finds such a man on one end of the line after a shift has been made he should be on the lookout for a forward pass to the newcomer.

When there is no wind to speak of and a team is in its own territory the spectator may look for kicking as early as the first or second down, while when the team is in its opponent's territory he may expect the full use of the running and passing games. With these general principles in mind and some attention paid to the kinks in the rules explained above, the spectator should be well enough equipped to follow the game with profit and a desire to become even better acquainted with its finer points.

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CHAPTER XII

SECTIONAL AND TEAM TYPES—COACHING TENDENCIES— FUTURE STRATEGY

MANY a man has left the stand after a Harvard-Yale game declaring for the benefit of all those who would stop to listen, "That was not a Yale team," or, "I never saw a Harvard eleven like that before." Just what did he mean? Nine times out of ten, if pressed, he could not tell. What he *did* mean was that through years of watching the game he gained a number of impressions which in their sum marked Yale or Harvard as a type—as a team type. The absence of one little thing or another—just what he could not say—resulted in his failing to get the same series of impressions and thus the idea of type. For team types do exist, although they are not as clearly marked as they were years ago. Time was when a spectator fairly well up on football could have identified a Harvard, Yale, Princeton or Pennsylvania team almost as far as he could see it, no matter what the colors worn. The same was true, too, in the early days in the West, when Michigan was quite distinct, for instance, from Chicago. But team types and sectional types are slowly passing. The spreading knowledge of the game all over the country and the changes in the rules impose conditions which must frequently be met by the creative students of the game, the coaches, by work along identical lines.

This fact still remains—that two Princeton veterans, even though miles apart, are apt to reason closer together

than one Yale and one Princeton veteran, and so on, and in this way team types are perpetuated. But two Princeton veterans will come closer to the conclusions reached by two Yale veterans than would have been the case years ago. As the years draw on I think that, with fairly stable rules, the type differences will draw nearer and nearer the vanishing point without ever quite reaching it. And this is a good thing for the game, for the simple reason that the nearer the game approaches a standard the more chance will there be for the expression of football genius both by coach and player. The "Yale school," the "Harvard school," the "Princeton school," of football are losing their sharp distinctions little by little. So that some years from now the man who says "That did not look like a Yale team," will really mean that it did not look like any standard team. Certain little matters of technique undoubtedly will remain, but it is inevitable in this day of free exchange of coaching opinion and extreme vigilance that the most cherished principles of one "system," when sound, will be adopted into another "system."

Without doubt Yale was the first institution to have a winning "system," and that system long remained a mystery, but year after year coaches went out from New Haven and freely taught what they had learned there. This does not mean the giving away of any "secrets," for there are fewer real secrets in football than the man outside the coaching council imagines, and despite the atmosphere of mystery with which the coaches love to surround themselves there is not a great deal to hide. Given patience, application, and the right kind of brains, and even the most difficult cryptogram may be read. It would be idle to suppose, therefore, that able football men had not been working from the *outside* on system after system. Some of the secrets have been brought to light in that way. The ultimate system, or standard, will be a composite of all

that is good in all systems. This standard will still vary in detail at the various universities.

In the nature of things there will be more variation in the attack than in the defense, for the defense is already pretty close to standard in the East, and gradually approaching that point in the West. The defense varies principally when being specially prepared to meet an eleven unusually well equipped in some one branch of play, as in kicking or forward passing. But nine coaches out of ten, in planning attack, have in mind a standard defense, and build their theory accordingly, which means, in the end, that the *theory* of attack, not its *application* to a team specially equipped at certain points, must itself approach a standard. Were a coach dealing with automata of fixed values instead of variable human quantities he would eventually evolve a sort of extremely interesting chess.

I shall not attempt here to say when a Yale team is a Yale team, a Harvard team a Harvard team, etc., but to sketch in the sort of football they have played in the past as it impressed the man in the stands—the sort of football that has led to the idea of team types. In general my idea of Yale is synonymous with power and resource; of Harvard with brilliancy, until recently spasmodic; of Princeton, blinding speed; and of Pennsylvania, variety. All these are reflected in other institutions East and West. Teams such as Dartmouth and Brown do not leave a settled type impression, although the coaching is of the highest class, and the Army and Navy are on advanced theoretical ground but erratic in execution. Carlisle is not a rounded team, as a rule, but the impression one gains of the Indians' play year in and year out is one of extreme variety on attack. Cornell has had occasional teams that approached the modern advanced theory, but I do not think the Ithacans have ever reached the type stage.

In the West there has been less of the type idea, save as

one eleven or another reflected Yale or Princeton coaching, with the exception of Michigan, whose eleven has always been the great chance-taker of the football world.

Yale football has always been the football of resource—the football that was always looked to to accomplish the impossible, and frequently did accomplish the improbable. If one plan failed, another succeeded, and there is almost always more in a Yale team in the last five minutes of play than in any other eleven. Yale has built the attack around weight when it was possible to get weight, and the teams have kept their feet better than any others. George Foster Sanford, one of Yale's greatest coaches, has said, "I am the man who put the power behind the ball." It is true of Yale teams of the past, when it was permitted by rule to push and pull the runner, that the power not only has been behind the ball but very often with it. A Yale play had more than one thrust. It swept along like a wave—it gathered momentum, and the farther it went the more powerful it grew. It was an axiom that Yale would always be equipped with a sound defense. The defense has been the pride of the New Haven system for years. In the old days smaller elevens considered it a practical victory could they only score on Yale. Yale has always begun with the defense and ended with the attack. There were times when the attack was so powerful that the defense was never put to the test. But at New Haven a clean goal line has been a fetish. It is true that in recent years it has been impossible to repeat the old records when the season's total ran to something like 500 to 0, but to be scored upon is still looked upon with greater horror at New Haven than anywhere else on the football map.

Yale's resources extend even to the use of the "shoe-string," the desperate violation of all generalship whatsoever in the effort to win. The Blue has been the greatest rallying team between the halves, not so much because the

"Yale spirit," about which we read so much in the newspapers, has been aroused, as because there have been capable men at hand to correct technical faults that have come to light in the first half. And a Yale team of the first half has often been so little astray from the fundamentals of Yale football, that the brief intermission was all that was needed to set it right. Little things make larger differences in the play of a Yale eleven than in that of any other. These sudden changes in form have resulted not from sudden change in theory, but from change in execution. So when the spectator says of a Yale team that it does not look like a Yale team, he unconsciously means that it has not shown resource, and has appeared to lack power. Yale has not had as many wonderful backs as one or two other elevens, but there has almost always been a great line—if not a great line, then a good one. Yale has won more games with poorer backs than any other university, and that means power in the line properly applied.

Harvard football has almost always been brilliant, even in defeat, but has suffered too often one of the penalties of brilliancy, a tendency toward erratic performance as a team. It is only in the last few years that the Crimson's type of play has settled down to something approaching finish. There have been great forwards at Cambridge, but after all, the lasting impression one gets of Harvard football is that of a brilliant backfield. The list of splendid Harvard backs is as long as one's arm, and they have been men who too often have been on a losing team. For some unknown reason the schools that "feed" the Crimson seem to send up better backs than forwards, and at this writing it seems certain that Harvard will be well equipped behind the line for years to come.

With plenty of material for the backfield the natural tendency is toward quickly made formations and a rapidity and sweep of play not found in elevens which are more de-



Photo. by Paul Thompson.

SMART INDIVIDUAL INTERFERENCE

Wendell, Harvard's captain and halfback, is carrying the ball. After a good gain he has all but broken free, and is prepared with his right hand to "stiff-arm" the tackler in the secondary defense. The number of men on the ground bears witness to the efficacy of the Harvard interference.

pendent upon the work of the forwards. It was natural, of course, that Harvard should show advances in individual backfield play far beyond the ordinary, and with the excellent material at hand Harvard has imposed more duties upon the back than upon the forward. The season of 1912 was a fair sample, when a single back was told off now and then to take care of the most dangerous man in the line of the opposing team, with the result that individual interference at Cambridge is worth copying when the dependable men are at hand.

Prior to the advent of Haughton there had been a real football "school" at Cambridge which was in the front rank, but much of the scattered knowledge that had made Harvard teams formidable in the old days was solidified in Haughton, and he is to-day the best expression of what Harvard football really means. It is really beyond the line of scrimmage that Harvard's best work is done, and this in varying degree, I think, always has been the case. Like Yale, the Crimson has depended less upon deception and more upon effective execution than most other universities, if we except some of the shifts, which, after all, were used rather to keep the strong side of the line in action. Taking Harvard's backfield men in the mass, I believe that they have shown greater ability in turning at the right point and making their direct run into the tackler count for more than the backfields of any other university, also considered in the mass. Until quite recently Harvard has not shown the resource that has been one of the outstanding features of the Yale system, and the mistakes made have been as bad as the good work was brilliant—in other words there was always something of a drift toward extremes. Beaten Harvard elevens have played a brand of football that if kept up throughout the game would have insured victory, but, once "in the hole," the Crimson has not shown the resource that would bring victory out of defeat. Even the

best that Harvard had in the way of coaching was committed to some extent to the machine idea, and when the machine idea failed, there was nothing to fall back on. Thus Harvard has in the past set before the football public more in the way of well conceived plays than any other eleven, but once these plays failed to produce the results anticipated, the machine has shown a tendency to go to pieces, save in such instances, as when beaten, it has come back, too late, to the great standard on which it had been built originally. Considered as a team type, then, Harvard has done the big things brilliantly, and the little things rather poorly when under pressure, with the result that the Crimson leaves the impression of great backfield work and fair line play. In emergencies Harvard failed—this, of course, merely the record of the past, for Harvard's football future is bright indeed.

The last few years have seen the beginnings of a change I believe to be permanent. In the years to come, if the Crimson keeps on its present course, I believe that it, like Yale, will never go very far astray, and will achieve such a foundation that when in difficulties it will be necessary to go only a little way below the surface to unearth the best football in the country.

Princeton generally does the unexpected. The Tigers are originators in football, always have been and always will be. Too much credit cannot be given to the Orange and Black for prompt acceptance of the radically changed rules, and the determination to make the most of them. The onside kick, now no longer a part of the code, is a fair sample. This play was the most difficult to make, and at the same time perhaps the most fascinating in modern football. The Tigers took it up promptly, and while others complained of it, proceeded promptly to put it into execution. That they were never able to make it the scoring factor it promised at one time to be was

not the fault of Princeton's conception or execution of the play.

Among the very first to realize the value of the "loose ball" game under the new rules, Princeton opened out the play to the limit, and maintaining the terrific speed that had been typically Princetonian from the earliest days, played the game in the spirit as well as under the letter of the rules, with a stubborn courage of conviction that should have yielded even more victories. There are certain features of Princeton's play that to this day are debatable, and that are frequently censured by the non-partisan, but there can be no doubt of Princeton's honest belief in the new football, and sincerity of purpose in working it out along original lines. In 1912, to be sure, the Tigers took up the Minnesota shift, used in the East prior to that time by Yale, but took it up with a more thorough realization of its possibilities than was the case with Yale. At New Haven it had been of value as a "rescue play," but at Princeton, the Tigers were quicker to seize its fundamental principles entire and to realize that without any too much weight, and with the principal dependence upon sheer speed, the play was admirably suited to the Nassau school of football.

There has never been in any other Eastern university anything to equal for high speed the tackle run that for so many years was the outstanding feature of Princeton's play. Its effectiveness has varied, of course, but the fundamental principle has remained to be the admiration of all followers of football, of whatever gridiron school. The Princeton sentiment is for open football, and I think always will be. The game to the Princetonian is spectacular, and certainly, with individual opportunists like the Poes, John DeWitt and Sanford B. White at hand from time to time, there has been everything to create that sort of "atmosphere." Undoubtedly as the various "schools" of football approach a standard Princeton's methods may not

be as salient as they have been in the past, but the Tigers have certainly demonstrated convincingly the value of speed to the game, and in the matter of following the ball, one of the best supports of very fast play, have been almost uncanny. This following of the ball, indeed, belongs to the "atmosphere" of football at Princeton. Princeton football as a type, then, means tremendous pace, with the deception that goes with pace.

Pennsylvania has played some of the most sensational football of any team in the East. It is only in the last few years that the Quakers have seemed to get down to something approaching a plan of generalship that can be handed down from one coaching squad to another, preferring as a rule to do the unexpected, to put faith in special plays, and to use these in any part of the field and trust to their brilliant execution for victory. The old time "guards back," of course, was in the nature of a planned game, for this was a play that would bear constant repetition, and was so powerful in its nature as to constitute an entire offense. With the radical changes in the rules, however, and the necessary abandonment of the "guards back," the Quakers have developed a style of play that has not always stood the test of the keenest criticism but has shown the most remarkable variety. The Quakers were among the first to change the established order of the backs and to work out a system of open football that was a puzzler to those elevens that had not been working along much the same lines. Unexpected plays were made in unexpected spots, and these plays were often successful even when violating the rules of generalship as they had been worked out at other leading institutions and depending upon sprinters in the backfield. It would be interesting to see how the Red and Blue method would work out once more against an eleven that uses the accepted Eastern generalship. In 1912 against a rebuilt Cornell eleven playing a systematic style of game the

Quakers seemed to have developed a system of their own. Their choice of plays on the various downs was quite different from what it had been in the past, but I think, had the material been a little better, the Red and Blue would have gone back to some of its old methods and would have used greater variety of play than was in evidence in that particular game.

The old form of the onside kick and the field goal from placement are peculiar to the Quakers, and like Princeton, the Red and Blue fought desperately to make something of the onside kick that was barred by the rule changes of 1912. Like Princeton, Pennsylvania deserved better luck with this well conceived and well executed play. But to-day as always Pennsylvania may be relied upon to make a play for the play's sake, and with an apparent utter disregard of consequences, should anything go wrong. It is this tendency that makes it one of the most interesting elevens in the country and leaves the impression that without the variety that has marked it in the past football at Pennsylvania would be of little moment. Indeed, with such a typical tendency toward variety the work of Pennsylvania may have a considerable effect on the generalship that is to come.

Two great fundamental differences mark Eastern and Western football. First, the Western coach usually bethinks himself of the offense before he tackles defense, while the Easterner is primarily absorbed in defense; second, there does not seem to be the same sustained power in attack in the West that one finds in the East. The Western runner does not stop when tackled as was his wont some years ago, but there is no gainsaying the fact that the Westerners do not keep their feet as do the Easterners, while at the same time showing in their entire theory of attack greater deception than is to be found in the East. Indeed, the West seems to believe more in deception than

in execution. At least the stress is on deception. There are Eastern football men, too, who believe in deception and use it to the best of their ability in coaching teams, but on the whole they do not seem to feel that the deception is quite so important. The type difference, then, is the difference in the conception of the play and of what the men concerned in it must be expected to accomplish.

It is only in recent years that the Western defense has come to approach the range of the Eastern defense, whereas Yost, the Michigan coach, has been far in advance of any Eastern coach in the planning of the forward pass. Again, few Eastern elevens have been able to maintain the pace set by Yost with certain of his "Hurry up" elevens, especially when he had Martin Heston behind the line. Heston has been called by good authorities the fastest man for fifteen yards in the country. Yost's attack was built around this man, who ran from the position of right or left halfback with equal facility, and the Michigan teams of those days were made up of giants. At Chicago, Stagg, another Easterner, and a Yale man, went in for the open game with a vengeance, and he in common with other coaches of the West, even though originally Easterners, has always fought for the retention of the forward pass. In individual technique the coaching of Western line men has always been behind that in the East. Line play, especially on the defense, has been more compact, and although the West developed such men as Schultz, the wonderful Michigan centre, and Benbrook, the equally remarkable guard, it cannot be said that there has ever been in the middle West a complete line that would have satisfied Eastern coaches.

To Dr. Williams, at Minnesota, a Yale man, belongs the credit for developing typical plays that did not depend, as did most of Yost's, upon the new game, but that were based on fundamental principles. In general it may be said that the Westerners are far readier to try a new idea than the

Easterners, and belong to the party of progress in football, while the Easterners sometimes suffer from excessive conservatism. On the Pacific Coast there has been nothing in football that could fairly be called typical. There have been many Eastern coaches at work in that section, but their methods have been for the most part such as are to be found in the East.

Before leaving the subject of team types a word should be said about Prof. Raymond G. Gettell, of Trinity, who has evolved a system peculiarly his own. Prof. Gettell is a graduate of Ursinus College, a small Pennsylvania institution, where by the way, they turn out excellent football teams. The point is, that while Prof. Gettell, who has had remarkable successes at Trinity, is himself an ex-football player, he has been a quite independent thinker, and has made the most of the open game, not hesitating to build his team on advanced lines, without any care for precedent or the experiences of others. It has been simply a case of applying brains to theoretical football, with the result that although short of coaching in individual technique, Trinity has turned out teams as distinct from those of the other small colleges as Harvard was from Yale, or Yale from Harvard in the old days. It is inevitable that in course of time, when, as has been said, the game approaches a standard, the novelty will wear off the Trinity system, but it has been one of the most interesting phases of the game since the radical changes in the rules.

Just where the strategy of the future will lead is beyond any but a prophet to say, but it is reasonably certain that with the generalship approaching a standard, the best outlet for coaching genius is in clever violation of standard principles, always provided that these violations are successful. With a common scheme, or nearly common scheme of generalship, it is obvious that in the course of time the strategist will have to figure on just how he would go about

fooling himself were he coaching the opposing eleven, and will see his path to innovation through departing from the accepted idea just enough to retain all that is fundamentally sound while making sure that the variation will not disorganize his own eleven. In other words the guessing match will have to begin with a guess as to the other coach's opinion and expectation of any particular eleven, and end with a decision as to whether greater deception will be accomplished by doing the expected, or by doing the unexpected. Simply put, it is a case of matching coins all over again. This applies, of course, only to those coaching systems which are thoroughly up to date and in position to teach an ideal game theoretically.

"Tricks," or, as they are commonly called nowadays, "brainstorms," have occasionally won important games, but as a rule the novelties that endure and are absorbed into all the coaching systems are those that are based on some fundamental principle, like the timing of the charge, the catching of the defensive line in motion, etc. Undoubtedly there will be progress in the future in the direction of removing the waste so common in most systems to-day—the waste that consists in leaving a good man in the attack too far from the ball, simply to care for some good man of the defense who is also far from the ball. The serious flaw with the "sliding" defense to meet the sudden line shifts is that it has not taken care of the element of individual excellence. In other words, the side-stepped line is not as strong individually as the shifted line, for in such a defense, the best so far devised, it is impossible to meet the "pairing" of two powerful men in the offensive line by the pairing of two powerful men in the defensive line. There is plenty of work for all the strategists right here, and if the defensive system has not made the most of the personal element, it follows that the attack is in the same case, and may be

developed beyond any point reached up to and including the season of 1912.

The advance will be the quicker, I think, when the great majority of teams have approached what seems to-day to be a reasonable standard. A great coach has said, "The game is still in its infancy," and this is undoubtedly true, but the next strategic step will come, I think, not through inspiration, but from sheer hard work on the basis of the experiences of all the great coaches.

CHAPTER XIII

GENIUS ON THE GRIDIRON

IN spite of its insistent demand for the subordination of individual to team effort football has produced more stars than any other college sport that has been dependent on organization on the field. The game has found room alike for the man who is born to lead in athletics and for the man who must attain such eminence as he can through unceasing effort and the assimilation of the best obtainable coaching. Among those who follow the game closely, equipped with some knowledge of technique, the quiet worker gets as much recognition as the star, but the general public dearly loves a hero, and football provides them in ever increasing numbers. The great drop-kicker and the great runner, these are the two types readily understood and as readily admired by the mass of the crowd at a big game, but they themselves are usually the first to point out the fact that their feats often would have been impossible were it not for the aid of the other members of the team.

From time to time a man appears, however, to whom coach and spectator alike doff their hats. Their work is so palpably that of sheer genius that there is no room for envy even in the breasts of other players. Their kingdom is that of the Heffelfingers, the Poes, the Brickleys, the Wendells, the Osgoods, the Glasses, the DeWitts, the Thorpes, the Hudsons, the Dalys and many others—truly a glittering host. A few of the brightest stars of the gridiron were practically beyond coaching—Hinkey of Yale, Hamilton Fish Jr. of Harvard, John DeWitt of Princeton, Heston

of Michigan, Wyckoff of Cornell, Hare of Pennsylvania—men who could play football apparently without taking thought. Seldom does a season pass without the appearance, East and West, of at least one man of this type, and it often happens that there will be several in the football limelight.

The follower of the game of long ago will remain faithful to a large extent to the heroes of his time—Yalensians to Bull, Vance McCormick, Wallis and Winter, McClung, the Blisses, the elder Hinkey; Princetonians to Hector Cowan, Riggs, Wheeler, Janeway, Lamar, Black, Edgar Allen Poe, Phil King, Trenchard, Holly and Lea, Addison Kelly, and many others; Harvard men to Mackie, the Traffords, Arthur Brewer, Lee Emmons, Newell, Hallowell, and others of their day; Pennsylvanians to Wharton, Gelbert, Rosengarten, Thayer, Brooke, Schoff, Vail, Knipe, Osgood and Carl Williams—it is impossible to name enough of them in reasonable space to satisfy the old-timer. But the mass of the football public is forgetful, and hungers for new sensations by new men. They are forthcoming almost annually, it seems, but the time will come, I think, when genius in football will not have to produce a long run for a touchdown or a field goal in time of desperate need in order to earn the lasting encomiums of the public. In that happy day some of the wonderful, even inspirational work done by players who do not figure immediately in the scoring will be estimated at its true value, not alone by veteran players but by a public that has been thoroughly educated up to the finest points in individual technique and in generalship.

If you talk to-day to an old-time Princeton player about the famous field goal of Arthur Poe, of the almost equally famous goal of John DeWitt, he will grant you the spectacular eminence of these men, but will want to put in a word for the less noticeable work of these same players and of others who have not achieved anything like so great fame.

The same is true of the Harvard, Yale, Pennsylvania, Michigan, Minnesota, Chicago or Cornell veterans. They will want to talk of the feats that made them wonder even while in action, no true appraisal of which has been made by the mass of football followers. If genius is the capacity for taking infinite pains, then theirs is the truer estimate, and there has been far more individual stellar work in important games than the casual observer had suspected.

It is natural, however, that the enduring feats should be those that were connected with some psychological moment, that moment that football provides with greater frequency than almost any other game, and in turning out the man for the moment Princeton has led all the universities and by a comfortable margin. Oddly enough, too, if one delves deeply into these remarkable Tiger performances he will find that some excellent bit of individual work on the part of another player led up to the great play of the day.

Measured by the paucity of time remaining in which to turn defeat into victory, and the unexpectedness of the maneuver, Arthur Poe's field goal at New Haven in 1899 occupies the pinnacle so far as individual genius in the moment of trial is concerned. Only the year before Poe had beaten Yale single-handed, and no one would have been greatly surprised had he picked up a loose ball and made a long run, perhaps for a touchdown; but that Poe could drop-kick a goal from the field not the most sanguine of the Princetonians themselves would have believed. Poe was a very small man, not at all the ideal end of to-day so far as build was concerned, but he was a terror at following the ball, and when he played against Yale for the second time, the Blue had a wholesome respect for the little Tiger busybody.

Poe appeared at right end, and played his usual slashing game, which included remarkable interference for so small a man, throughout one of the toughest struggles ever in-

dulged in between the Blue and the Orange and Black. There were sensational features of the sort in which the crowd delights long before the emergency call came to Poe, and even had he not won the game for the Tigers, there would have been enough to talk about for years to come. Princeton that year had the slashing Tiger tackle play moving with terrific speed and beautiful timing, and with Reiter carrying the ball, was at all times a potential ground-gainer of the dangerous order. It was a long run by Reiter, followed by a series of short plunges, that gave the Tigers their first score. This run in itself was made possible not alone by superb interference, but by individual work of a high order on Reiter's part.

Yale soon afterward scored a touchdown as the result of a blocked kick. So matters stood when the Yale eleven, toward the close of the first half, found itself just over Princeton's forty-yard line. The Blue had its own emergency man out that day in the person of A. L. Sharpe, now building up a coaching system at Cornell. Sharpe was one of the greatest all-round athletes ever turned out at New Haven, but even his ability as a drop-kicker had been unsuspected by the crowd. Unable to advance, the Elis called upon their star half-back, and Sharpe sent the ball over the crossbar and between the uprights from a distance of 46 yards, and from the side of the field, a phenomenal kick under any conditions. From the Princeton viewpoint the play was especially disheartening, for nothing takes so much out of a hard-worked team as to be scored upon from such a distance when the eleven realizes that in all other respects it is playing its opponent to a standoff.

There were fewer than five minutes of the second half left to play when Princeton's pretty running game began the process of making an opportunity for Poe. There was more life in the Princeton eleven than in Yale, for it had been

wisely decided to send in fresh men with great rapidity, and this alone was evidence of excellent headwork. Again the Princeton tackle play settled down to its work, and in six plays the Tigers were within striking distance, but without, as everybody thought, a drop-kicker upon whom to call.

It was Poe himself who saw the opportunity and asked for his chance. He had a brief talk with W. H. Edwards, the Tiger captain, and the latter, realizing that the time was almost up and it was impossible to score by rushing, granted the little end's request. Poe, Edwards figured, was a steady, reliable player in all other branches of the game, and was also a senior. There did not seem to be one chance in a hundred that the play would be a success, but Edwards figured that if anyone was to take the chance Poe was the man. The men lined up in the kick formation, the ball was passed to Poe and the little man sent it fairly over the bar between the posts, winning the game by a single point with only 36 seconds left to play. It was a wonderful piece of work for a practically unpracticed kicker.

It is plays such as this that appeal to the public as the individual expression of genius, but I shall turn now to a bit of splendid thinking and instant decision that would never catch the mass of the public and even escaped some of the keenest critics on the side line. It resulted in the defeat of Yale by the Army in 1911 on a field no better than a morass, and was the work of R. F. Hyatt, the Army captain and quarterback. Yale went to West Point that day equipped mainly with the Minnesota shift, led by two veteran tackles, Scully and Paul, only to find that the footing, owing to two days of steady rain, was extremely treacherous, and that West Point's defense against the shift was far and away the best the team had met. Indeed, before the game, it was openly asserted that the shift would not gain against the Army defense. And so it proved.

In the meantime the Army had been working out a form

of attack based on the "lop-sided" line—that is, with only one man on one side of the centre. Simple but powerful plays had been devised for use from this formation, but they were in crude form on the day of the game. It had been planned, however, to strike quickly and strike hard, before Yale became accustomed to facing the altered formation, and to that end the kicking game was begun at once, in the hope of making an opening for the use of two or three of the strongest running plays. The game was scarcely more than a minute old when the opportunity came through a blocked kick recovered in Yale territory by an Army player.

Hyatt's first play was a good ground-gainer, but it carried the team well to the left of the goal posts. The second play had been planned, not only to gain ground, but to bring the ball well out in the field again so as to provide a chance for a field goal should the running plays fail. Had Hyatt adhered to the generalship laid out for him he would have swung his next play to the right, but in an instant he noticed that the Yale defensive backs were out of position, and instantly changing his generalship he shot another play over to the left and away from the goal posts. It was so successful that it was an easy matter to send Dean on the third play over the line for the touchdown which was the only score of the day. Had Hyatt adhered to the original plan, he could not have been censured by the coaches, but from his position on the field he could see the flaw in Yale's defense far better than they, and thus violated the generalship and gained the victory. Truly an inconspicuous proceeding as far as those in the stands were concerned, but nevertheless an expression in the highest form of genius in football.

Another form of football genius is the finding of openings and the choosing of the path that leads to touchdowns. This sort of genius lies dormant now and then for a long

period only to come to the surface in marvelous fashion as in the case of S. B. Thorne, the great Yale broken field runner who at one time was not very promising, and in the case of F. M. Tibbott of Princeton, one of the uncanniest tackle runners ever seen on the field. There was nothing in Tibbott's running that savored of strength or surface cleverness, but he had a way of slipping away from a tackler that troubled the best of them. Tibbott was a consistent scorer, even when his team was being beaten, while Thorne did his great running against Princeton on a day when the Tigers were themselves in scoring mood. L. Stacy of the Army was another great runner who was a master hand at turning the ends, and had a peculiar "switching" style of crossing the field and shaking off tacklers that was sheer gift and never could have been acquired. Yet to-day hardly anyone ever hears of Stacy.

Kelly of Princeton was another genius who knew more football than anyone could teach him, and who upon occasion proved that he could go it alone. One of the most remarkable exhibitions of consecutive ground-gaining with little or no assistance that I have ever seen was given by Kelly in the Yale-Princeton game of 1897 at New Haven, when a veteran Tiger eleven was defeated by an unheralded team in blue led by that splendid tackle and oarsman, James O. Rodgers. The Tiger team, which had smothered Yale the year before at the Polo Grounds, boasted of such veterans as Cochran, Holt, Hillebrand, Baird, Bannard, Kelly and Reiter, and was a favorite in the betting at 3 to 1. It became apparent soon after the game opened, however, that it was a case of overtrained veterans against under-trained youngsters who were figuratively bursting with ambition, and the inevitable happened.

With almost certain defeat staring them in the face, the Tigers made one last desperate rally, and in doing so called repeatedly on Kelly, with the result that with this

star carrying the ball in nearly every rush the Princeton eleven carried the ball fifty-five yards up the field only to lose it at last on a fumble. Time and again in the course of this heroic advance Kelly went into or slid outside of tackle practically unaided, bowling along more like a big ball than like a human being. It was one of the great exhibitions of a born runner, of a football genius, and much more to be lauded than his work the previous year, when he was aided by one of the greatest football machines ever sent into a big game.

Harold Weekes of Columbia was another backfield genius who stands near the top. I know of no other back in the history of the game who was able to put on a greater burst of speed at the instant of turning an end than Weekes, and although his hurdling the line was always spectacular when done with the special formation devised to carry him up into the air and over the forwards, his end running was the one thing in which he relied upon his own superb speed and judgment of pace. In this he was practically beyond coaching, a law unto himself.

C. R. Wyckoff, the Cornell captain of 1895, was one of the few Ithaca players who ever showed real football genius. A small man, he ran erect, like a sprinter, in a broken field, and developed himself into an excellent punter with practically no tuition in that branch of the game, learning how to get remarkable distance considering his light weight. No other runner that I have ever seen has been such a consistent performer in running back a kick-off unless perhaps it be T. L. Shevlin, the Yale end. Their methods were much the same, simple and direct, for both came straight up the field without swerving a yard, it seemed, from right to left, and both struck the first gathering of tacklers at such terrific speed, that many of them were spilled before the runner was brought down. Here Shevlin's weight stood him in good stead, but Wyckoff was small, and seemed to

cut through the bunched tacklers like a knife. Both these men were masters of some mysterious football craft that it seems impossible to teach. There are endless examples of this individual football genius when carrying the ball alone is considered.

The geniuses of the defense have been fewer, it would seem, yet here too, individualism has had its day and is still having it. One of the greatest tackles ever seen on any field was that by J. W. Field of Yale, in the Harvard-Yale game of 1910 at New Haven. That tackle undoubtedly saved Yale from defeat. The powerful Wendell had been slipping out opposite tackle and then driving straight ahead clear through to the Yale secondary defense again and again, carrying the ball steadily into Yale territory. Time and again he drove his powerful shoulders into the Blue tacklers and kept on for yard after yard before he was brought down. The Yale defense could do nothing with him or with the play, it seemed, and a Harvard touchdown appeared certain, for the ball had been carried to within thirteen yards of Yale's goal and the play was still moving with all the precision and power it had shown further up the field.

Just at this point the Harvard quarterback thought it a good plan to relieve Wendell for the moment, saving him for the supreme effort that was to result in a touchdown. So he gave the ball to Corbett, another strong runner, and the latter, moving in the same type of play, drove through in approved Wendell fashion to the Yale secondary defense. But Field, who had borne the brunt of the defense, was in desperate mood, and came up just as fast as the Harvard runner. He struck the Crimson back with all the force at his command, and made a perfect tackle, so terrific that Corbett dropped the ball, a Yale man fell on it, and the game, as it turned out, was saved. Field had to leave the game, but he had taken the steam out of the Harvard

attack, and many good judges agree that no player living could have held onto the ball had he been tackled as Field tackled Corbett. It may be considered a stretch of the imagination to call such a tackle a manifestation of football genius, but to my mind Field did a thing that no one but a born football player could have done, and in such a way that the moral effect of it was felt by both teams.

Genius in defense is based largely on able diagnosis of plays. Coaching will go far toward teaching a man how to diagnose the attack, but there have been men who were born to it, and who in this respect were practically beyond coaching. Of these I think Frank Hinkey of Yale was first. Here was a man who was slender and even almost weak in appearance, and who, especially against Princeton in 1893, faced some of the most powerful plays ever devised. Against him was thrown interference of an order seldom seen since, and yet Hinkey sifted through this interference with great regularity just as he had always sifted through interference ever since he had made his first appearance at Yale. He had a method all his own, and not even the best coaches could show him anything in the matter of diagnosing plays. To men who followed Hinkey's work while he was an undergraduate at New Haven the man always seemed less a body than a flame—an indomitable and strange spirit in a none too rugged casing of flesh and bone. Nowadays, ends and others who disentangle interference keep their heads up until they have come to a decision as to how best to reach the runner, but Hinkey seemed to have the knack of going in with his head down and apparently looking only at the ground, and getting his man no matter how strong the interference against him.

It was in this same game of 1893 that J. R. Blake, the Princeton fullback, did a bit of quick thinking and took a dangerous risk that meant a great deal to Princeton's chances. It was at a time when Princeton was working

steadily down into Yale territory. Yale managed to get the ball, but was forced to kick at once, and Butterworth lifted a high, short kick to Blake, who was playing a very deep backfield. Blake came up at top speed, but instead of slowing up and trying to make sure of the ball on the bound, he lunged forward full length and snapped it up on the fly. It was a dangerous form of catch to attempt, but once having made up his mind Blake put his plan into perfect execution. The Yale forwards, notably Hinkey, were well down on the ball, and a fumble at this stage would have meant trouble for Princeton, possibly a long run on a picked up ball, or worse. As Blake dived forward and gathered in the ball he and Hinkey came together head on in one of the worst collisions I have ever seen in football, and neither man was himself after the crash for the rest of the game.

I have mentioned in my first chapter the genius of Cooney of Princeton, in adapting his defense to a new style of play in a game against Cornell, which was a very fair sample of individual initiative, and I want to say a word here about the clever thinking on defense of a man who played against Cooney. I refer to the late J. J. Hogan, of Yale, who was a fine type of athlete. The incident I have in mind occurred in the Harvard-Yale game of 1903. Harvard had made a desperate rally, determined to score, and at last sent Nichols away for what seemed a sure touchdown. He was tackled just as he seemed to be crossing the line when Hogan swung around behind from the other side, and tackling the Harvard halfback high, and holding him up, slowly bent him back and away from the goal line, finally putting him to the ground when the last chalk line was safe from invasion. Nothing but great strength and tackling in a certain way prevented a touchdown.

Harvard had an eleven in 1912 nearly every member of which was close to a football genius. This accounted in part for the superb individual interference so much in

evidence on the day of the game with Yale. Perhaps the greatest credit in the way of thinking football on that day should go to Gardner, the quarterback, who made a remarkably fine selection of plays, and in so doing removed the last criticism against Harvard's football methods. For Brickley as a drop-kicker Yale had been prepared, but not for Brickley as a runner. Using Wendell in the middle of the field, the little Crimson field general suddenly fell back upon Brickley when at last within striking distance, and also chose a wide end run although there was not a great deal of ground to cover. How well his choice was made was proved by the result, for Yale was not prepared to see Brickley take the ball, and this allowed just enough of a start to make the play go, aided by superb interference on the part of Wendell and Hardwick. This was football sense amounting to genius on Gardner's part, and although he did not achieve an All-America standing, his day's work was as useful as a quarterback could be called upon to show.

Brickley himself is a fine sample of football genius, although his kicking is so spectacular as to rob him of credit due for other good points of play. He is the popular type of football hero, but would be a great asset to any team even if he could not kick at all.

It required no deep student of the game to recognize the football genius of E. H. Coy of Yale, yet Coy's finest achievement was not merely the making of a run that resulted in a winning touchdown, but in keen estimation of the value of each man on his team and accurate summing up of his own abilities, so that in the year of his captaincy he converted himself from a wonderful runner into a remarkable drop-kicker. And the way he went about it was characteristic, for finding the regular drop-kicking method unsuited, he dropped the ball so that on the rise he could catch it on his instep, thus, while keeping within the rules, turning his powerful punting ability into a suc-

cessful scoring factor. Coy knew that he was not at his best as a runner in his last year, but was determined still to be a foremost figure in the scoring. This bit of headwork resulted in his retiring with his reputation still at its zenith, instead of going the way of so many other stars in the year of their captaincy.

The individual exploits of John DeWitt of Princeton are still fresh in the memory of most followers of the game, but some of his warmest admirers maintain that his genius lay in his qualities as a leader, his adaptability, and his actual line play, even against such a remarkable man as Glass of Yale. Until Thorpe, the Carlisle Indian, made his appearance, there was no more dangerous runner from the strategically interesting kick formation than DeWitt, and I firmly believe that DeWitt's running was done against better defenses than Thorpe was called upon to face. DeWitt's build was ideal for the tackle position, but he was quite as good a guard, and his all-round knowledge of the game was as great as that of any man who has come out of Princeton in recent years.

No consideration of football genius would be complete without mention of the coaches. Genius is, of course, to be expected of them in the way of planning plays and laying out campaigns, but there are smaller things in which the same quality comes to the surface. One of these is the handling of men and getting out of them more than anyone would dream was in them. I have in mind a case at West Point two years ago, the coach in question being Capt. Joseph W. Beacham, Jr., U. S. A., and the player A. V. Arnold, a guard on the Army team. The eleven was being prepared for the final game of the season, the battle with the Navy. The Annapolis team boasted the services of a young man named Brown whose play at guard had been a terror to the Army the year before, and whose specialty was getting down the field as fast as the ends and smothering

the catcher of kicks. The Army coaches figured for a long time over some way to keep Brown from getting down the field without using too many men in checking him. Finally, the head coach, who knew the temperaments of all the players as thoroughly as any coach I have ever seen, tried the simple scheme of a sort of mental suggestion. Hyatt, the team captain and quarterback, was the man played back on kicks, and he was not rugged enough to stand the hard tackling of a man like Brown should it prove to be constant. Hyatt was a popular leader and the other members of the team swore by him. One day after the practice the coach led Arnold aside and said to the husky guard, "Arnold, do you like Hyatt?"

"Why, yes, sir; why?" was the puzzled reply.

"Oh, nothing, never mind," said the coach, "I just wanted to know."

Question and answer were repeated day after day, but it was not until within three days of the big game that the coach enlightened the big forward on the subject. He put the usual query and received the usual answer. Then he said, impressively: "All right, if you care anything about Hyatt don't you let that man Brown get down the field."

Throughout the big game Arnold played as never before, and whenever the Navy kicked saw to it that Brown, with all his strength, speed, and cunning, did not get down the field. One of the most dangerous men in the Navy line was thus effectively checked, and by one man. Surely this was in the nature of genius on the part of the coach in handling men.

When it came to genius as shown in the invention of football plays Walter Camp, Lorin F. Deland and Wylie Woodruff long had the field to themselves, but to-day Dr. H. L. Williams at Minnesota, Percy D. Haughton at Harvard, Fielding H. Yost at Michigan, A. A. Stagg at Chicago, Ed. Robinson at Brown, Frank Cavanaugh at Dartmouth,

and Glenn Warner at Carlisle are names to conjure with, while Prof. Gattell at Trinity, J. F. High at Wesleyan, and Hermann Olcott at New York University, who also coaches at Annapolis, are rapidly working into the front rank of the strategists. And the Springfield Training School has proved that it has some football genius who is supplying the teams from that institution with some of the cleverest and most successful forward passes the game has seen. The individual has certainly survived.

Coming to diagnosticians of the coaching ranks we find such men as George Foster Sanford of Yale and Reginald Brown of Harvard in the field. Sanford's exploit in changing the whole style of Yale's defense between the halves in the game at New Haven in 1907 so as to check a brilliant Princeton attack that had rolled up ten points in the first half is too well known to need more than mention here, while any man who has sat close to Brown in the grandstand and heard him call off play after play before the ball was snapped will hardly need be told that this quiet Harvard man is also one of the real geniuses of the game.

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CHAPTER XIV

ETHICS OF THE GAME—RELATIONS OF SCHOOLBOY AND COLLEGIAN—THE FACULTY ELEMENT

At the top of the football scoreboards of ten years or so ago there appeared these two words in huge letters: "HARVARD—OPPONENTS." To-day the lettering runs: "HARVARD—VISITORS." The same change has been made at Yale and Princeton and at other institutions East and West. A change small in itself, but unmistakable proof of the new order of things and the progress of a better feeling among the great football institutions. The first institution to change the scoreboard lettering came in for a deal of good-natured guying, and certain of the old-timers called the proceeding "soft." To be fair, to be courteous, in football, however, is no longer considered "soft." There is still a long way to travel in order to reach the ideal condition, but the progress has been steady.

Little by little the general public has come to look not for the old cartoonist's idea of the football player—a gladiator in armor—but an athlete playing the most exacting of college games, an athlete prepared to undergo with honor the severest test to which sportsmanship can be put. Personal physical contact in any game stirs in any manly man worthy the name the old fighting spirit, and there were games in the old days when the players "saw red."

That sort of thing is rare nowadays. There are plenty of hard knocks, to be sure, and the game is still rough, as it always will be, but out-and-out slugging, tripping, falling on a man's head or "kneeing" him in the soft part of the

lower leg have all but disappeared from the game. The rules against this sort of thing are more severe than they used to be, the officials are quicker to note offenses, for there is team work among the officials too, and the game has been so frequently under the fire of outside criticism that its supporters have done their utmost to curb lawless play. This granted, I believe that the general sentiment both among the players and the graduate and undergraduate bodies has had a great deal to do with "cleaning up" the sport.

Time was when the player was led to believe that the man who was to be his opponent in the big game concealed under his uniform both horns and a tail. Two utter strangers came face to face on the field before a crowd of 10,000 or more and fought each other to a finish, by fair means if possible, but too often by foul. Not that there were not good sportsmen in those days, not that the football field was not the scene of more than one generous action—merely that the sportsmanship was spasmodic. And there were years, too, in which two whole teams went at each other hammer and tongs—simply "beat each other up." Then came charge and countercharge, and not infrequently the severance of all athletic relations between two ancient rivals. It followed that the two teams could not get together again until each university was equipped with a new set of undergraduates and the hatchet could be decently buried.

Nowadays there are still quarrels and cross-charges of rough play, but they are not lasting and they do not cause the tremendous upheavals in the college world they used to do. There are signs of permanent health in football, and the lapses from virtue here and there only serve to accentuate the general good feeling. The players of to-day are too absorbed in the business of learning the intricacies of a much more difficult game than of old to have any time

to devote to undue roughness and personal rancor, and so great is the demand for personal efficiency that the player cannot afford to waste any of his precious energy in "rough house," even if so inclined. The big games are usually "clean," even if the lesser ones cannot go scot free of criticism.

Granted that splendid progress has been made it is worth while making an organized effort to guarantee further progress in years to come. In this the National Collegiate Athletic Association, organized under another name in a time of stress, and in old-fashioned football opinion foredoomed to failure, has led the way. This organization has brought together representatives of football institutions all over the country, and as a result of the free interchange of opinion and a great deal of courageous truth-telling, has been able to wield a tremendous influence for good in football as well as in other sports. Even the schoolboys have been reached to some extent, and although the organization seeks no power it has done splendid work. Perhaps the very fact that it sought no power was the reason of its success.

I refer to this association principally to show that the cure for whatever ill remains in football lies not so much in legislation as in force of opinion, and opinion from the "inside."

Some of this "inside" opinion might well be brought to bear on the relations between the collegian and the schoolboy. These relations ought to be closer than they have been and they ought to be on a higher plane. Too often the collegian has appeared at the school only to look over the football team and induce its more promising members to enter his own university. Too often "inducements" of one sort or another have been offered, and too often the schoolboy goes up to the university with an exaggerated opinion of his own prowess and importance only to do harm to himself and to

the university. Since freshmen are no longer eligible to 'varsity football teams the evil has dwindled noticeably, but certain of the smaller colleges are still in the ranks of the offenders.

Another great bar to the old form of proselyting is the advance in scholastic requirements. It takes a good student nowadays to stay on the football team, and yet the average collegian has made no organized effort to advise the schoolboy of that fact. He might name man after man, if he would, who is well up in his class and who plays football well largely because he does everything well. It seems not to have occurred to the 'varsity football man to go before his old school and tell the boys about the serious business of the university, omitting all reference to football. If he were to do so there would be fewer cases of schoolboy athletes who are willing to play on the team of any institution they may be sure of entering and remaining in without hard work.

There are earnest and capable students on most of the big elevens, but how many who might have made the team and at the same time have been valuable members of the undergraduate body have been lost by the wayside, simply because when schoolboys they were made to believe that athletic proficiency would make up for ordinary scholarship! To put it even from the viewpoint of the coach—of what value to the team in the end is the man who is always in difficulties with the college office? And the pity of it is that such a man might never have been in such difficulties had he only been warned in time. The larger preparatory schools understand this thing better than they used to, and they are in closer touch with the collegian who is at once athlete and student, but apparently no helping hand, save in rare instances, has been held out to the smaller schools where the need is great, and also immediate. It is a mistake to suppose that the schoolboy will not listen to the college

athlete on any subject other than athletics. On the contrary he is sufficiently impressed with the collegian's reputation to give respectful attention to his discourse whether it be on Calculus or intensive farming. The football may come later.

It is to the interests of the college athlete that the "prep" school boys who come up to the university be well prepared. It is the only absolute safeguard against the revival of ancient feuds with the faculty, and the only guarantee of thorough co-operation between the faculty and the athletic heads. Committees are all well enough in their way, but committees are not human, while individual members of them are. The faculty member with the "grouch" against athletics is well known. I do not think, however, that he is a permanent institution, but rather the fruit of the age-long misunderstanding between what used to be called the "high brow" and the "low brow" elements. I have spoken elsewhere of the increasing dignity of the professional coach and of his responsibilities in the practical outdoor guardianship of the candidates for the teams. With the increasing importance of the general playground idea at all the universities there will be more of these men in demand. I do not seek to maintain that all of them should be connected with the faculty in one form or another, but he is a short-sighted professor or instructor who fails to recognize the value of the newcomer's work.

The problem of maintaining harmony between what in the past were warring elements differs at different institutions, and each must work out the problem in its own way. The main point is that there must be the disposition to get together.

A great many faculty men have complained from time to time that those who were connected with sports occupied the lime light with too great frequency, although their complaints were couched in loftier language. The sponsors

of athletics, however, have never sought to deny them a hearing. Let them be publicists if they will, only let them spend some time and more than the customary care in a study of the subject. Their opinions will be welcomed, just as the National Collegiate Athletic Association has welcomed opinions on athletic welfare from any quarter whatsoever. Football, in greater need than any other sport of intelligent and constructive criticism, has been beset with vastly more of the other kind.

College football I believe to be a permanent American institution, and every man who will may have a share in building it up and keeping it on a high plane, whether player, coach, student, teacher or spectator. This particular "slice of life" is worth every man's while.

